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MONTHLY LABOR REVIEW

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The July *Review*

"Entrepreneurship, or the creation of a new business or enterprise, is an integral and significant activity in a growing job market," begins Robert W. Bednarzik in the lead article. His report goes on to document in some detail the impact of establishment births (and deaths) on total U.S. employment from 1989 to 1996. In general, the net of births over deaths contributed from one-fifth to one-half of job growth (or served to substantially offset declines). This finding supports and extends earlier studies that came to similar conclusions about manufacturing employment.

The baby-boom generation, called by at least one demographic wag as "the pig in the python," is now approaching retirement. In addition to the impact that this massive employment exodus will have on social security and health care, there will be considerable replacement needs for workers in a wide variety of industries and occupations. The industry that will be most affected is education, according to Arlene Dohm's analysis. For example, people in this industry often retire earlier due to the provisions of their pension plans. Transportation, health services, and several manufacturing industries also seem likely to experience significant needs to replace a retiring baby-boom cohort.

Katie Kirkland examines the effect of industry shifts on measurement of the workweek in the private sector. She finds that the long-term decline in the hours worked at the average private sector job has resulted largely from disproportionate employment growth and declining hours in short-workweek industries, such as retail trade and services.

Productive computer factories

Output per hour increased during the 1987–97 period in 108 of 120 manufacturing industries analyzed by the Bureau of Labor Statistics. Computer and office equipment posted the largest increase in labor productivity on average—25.1 percent per year. Unit labor costs declined by an average of 17.2 percent per year in this industry.

Annual productivity increases and unit labor cost reductions in the electronic components and accessories industry also averaged in the double digits from 1987 through 1997. Productivity increases averaged 19.8 percent per year, and unit labor cost declines averaged 13.0 percent.

Labor productivity is measured by output per hour. Labor productivity for the manufacturing sector as a whole increased by an average of 3.0 percent per year between 1987 and 1997, according to a separate analysis. Find out more in news release USDL 00–155, "Productivity and Costs: Manufacturing Industries, 1987–1997."

Retirees spending more on health insurance

Retired households spent more of their budgets on health insurance in 1997 than in 1987. In 1997, the share of retired households' expenditures devoted to health insurance was 7.4 percent, up from 5.2 percent in 1987. The share spent on all other health care expenses fell to 5.9 percent in 1997, from 6.6 percent in 1987.

The health insurance share thus rose 2.2 percentage points, compared with 1.4 percentage points for entertainment and 0.4 percentage point for transportation. The remaining expenditure categories generally had decreases in their spending shares from 1987 to 1997. More information can be found in *Issues in Labor Statistics: Consumer Spending During Retirement.* (Summary 00–11, May 2000).

Vietnam-era veterans in the labor force

In September 1999, 79.7 percent of male veterans of the Vietnam era were in the labor force. Nearly 90 percent of male Vietnam-era veterans were between 45 and 64 years of age in September 1999. Their nonveteran peers had a labor force participation rate similar to that of the veterans: 81.3 percent.

The participation rate for veterans with a service-connected disability was much lower than for nondisabled vets. About 12 percent of male Vietnam-era veterans reported having a service-connected disability; their labor force participation rate was 55.8 percent in September 1999, compared with 83.7 percent for vets without a disability. Learn more in news release USDL 00–165, "Employment Situation of Vietnam-Era Veterans."

Longer workweeks at the top?

More than 60 percent of net employment growth during the 1990s were among managers and professionals, jobs in which long workweeks are considered typical. Many observers believed that managers and professionals were working even longer weeks than in the past.

It is true that a substantial share of these workers put in very long weeks. Nearly 3 in 10 managers and professionals worked 49 hours a week or more in 1999, compared with roughly 2 in 10 for all nonfarm occupations. However, weekly hour averages through 1999 show that the workweek for managers and professionals had actually stayed around 42 hours for the entire 1990s decade. More information can be found in *Issues in Labor Statistics: Are Managers and Professionals Really Working More?* (Summary 00–12, May 2000). □

The role of entrepreneurship in U.S. and European job growth

Entrepreneurial activity, which is higher in the United States than in Europe, is important to job growth, but not as important as job expansions in existing firms

Robert W. Bednarzik

Entrepreneurship, or the creation of a new business or enterprise, is an integral and significant activity in a growing job market. Just as new establishments are created, some existing ones expand, contract, or dissolve operations altogether. Countries that have the capacity and wherewithal to accommodate high rates of business formation and dissolution will be best positioned to compete in world markets.

To examine and monitor this process, government agencies in the United States and Eurostat from the European Union have collected data on the births and deaths of establishments.[1] Until recently, U.S. establishment-based longitudinal data were available only on the manufacturing sector. However, new longitudinal data on the births and deaths of establishments in both the United States and Europe are available. For the United States, the new data series, referred to as the Longitudinal Establishment and Enterprise Microdata (LEEM), provides information on the services sector as well as the manufacturing sector. The Census Bureau collects the data for the U.S. Small Business Administration.[2] European Union data are collected by its "statistical arm," Eurostat, which developed a special data bank from existing statistical administrative data on small- and medium-size enterprises (SMEs) in 1994 and 1995. In addition, the Global Enterprise Monitor project collected comparable data, using a very small sample of 10 industrialized countries to measure the level of entrepreneurship and to study the relationship between business creation and economic growth internationally. The results of the survey show a wide lead in the number of new businesses created in the United States.[3] Although the Establishment and Enterprise Microdata and the Eurostat data on small- and medium-sized enterprises are not comparable, they each shed light on the nature and magnitude of a very important component of job creation—entrepreneurship. This article uses the Establishment and Enterprise Microdata and the international databases to determine the role of entrepreneurship in job growth for the United States and Europe.

The crux of the article examines the births, deaths, expansions, and contractions of establishments by size and industry to determine the net effects on job growth in the 1990s. The focus is on service sector industries, which led employment growth in the United States. Beginning with a description of the data, this article notes that some incompatibilities suggest that it is better to analyze U.S. data separately from European Union data. The article also provides a sectoral overview of the U.S. and European Union job markets to set in perspective the role of entrepreneurship in job creation. The results from the Global Entrepreneurship Monitor project conclude the article.

Tracking and counting

Since 1991, the U.S. Small Business Administration has contracted with the Census Bureau to produce comprehensive and timely data of U.S.

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businesses by establishment size. This led to the development of the Establishment and Enterprise Microdata file that consists of data on all U.S. private-sector, nonfarm establishments with employees. Data from this series do not include self-employed individuals, but they do track employment levels (size), payroll, and firm affiliation for more than 11 million establishments that existed at some time during the 1989–96 period. It is the first nationwide, high-quality longitudinal database that covers the vast majority of employer businesses from all sectors of the economy.[4] The basic unit of this file is an establishment—defined as a single physical location at which business is conducted or services or industrial operations are performed. An establishment is not necessarily identical to a company or firm, which could consist of one or more establishments. When two or more activities are carried out at a single location with a single owner, the entire establishment is classified on the basis of its major activity. More than two-thirds of multi-unit firms have less than four establishments, but other firms can consist of thousands of establishments.

For several years, Eurostat has been developing the European statistical system on small- and medium-size enterprises to improve the data on enterprises—births, deaths and employment changes. A limited amount of data is now available for 10 of the 15 European Union countries, specifically: Denmark, Germany, Spain, France, Italy, the Netherlands, Portugal, Finland, Sweden, and the United Kingdom. However, because the national concepts on measuring enterprise births and deaths are not fully harmonized, country comparisons of absolute figures should be avoided. Moreover, comparison with U.S. data on establishments is even more problematic, because European Union data include the self-employed (also termed sole proprietorships), but U.S. data do not. Only U.S. establishments that paid wages to at least one employee at some time during the year are counted; however, the number of establishments with no paid employees is not an insignificant number. In 1992, for example, the number of U.S. establishments with no paid employees was about 14.7 million. The basic unit of Eurostat data is referred to as the "enterprise," which is the smallest group of legal units producing goods or services and constituting an autonomous economic entity. Because the Eurostat concept includes sole proprietorships, it is not synonymous with the U.S. concept of an establishment. Therefore, the term "establishment" is used in describing only U.S. companies.

Employment comparisons

In the early 1970s, U.S. and European Union employment rates (employment as a share of the civilian population) were nearly the same. Subsequently, employment growth between the United States and Europe Union has developed a diverging trend. A closer view of this gap reveals that changes in employment rates over time reflect population changes. For example, between 1975 and 1998, U.S. employment grew, on average, just under 2 percent a year, compared with only an average of 1/2 percent in the European Union. Higher U.S. population growth provides part of the explanation, but it does not explain the dramatic change in the percentage of the working-age population now employed in the United States, versus the European Union. In 1975, the number employed as a share of the working-age population was 63 percent in the United States and 64 percent in the European Union. By 1997, the U.S. rate reached 74 percent and the European Union rate slipped to 61 percent. This differential is wholly explained by higher employment in the U.S. service sector.

Service sector. A key difference between the United States and European Union is the relative number of persons working and the size of the service sector.[5] (See table 1.) The source of the difference is in the service sector, because shares of the working-age population in agriculture and industry[6] are roughly the same in the United States and the European Union. Over the 1980s and 1990s, shares in both agriculture and industry reflected a slight decline, but the percentage of the working-age population in the service sector increased more in the United States, reaching 54 percent, than in the European Union, reaching 40 percent. The distribution ranking among the principal services industries—trade, hotels and restaurants, transport, finance, business and real estate, and communal services[7]—was similar in the United States and European Union, but a higher percentage of people worked in all of those industries in the United States. (See table 2.)

Gender and skill level. There are a few other U.S.-European Union differences in employment activity pertaining to the services industry that are noteworthy, particularly the share of employment by gender and skill level. Women accounted

Table 1. Employment rates by broad industry sector, 1997

[In percent]

Item	United States	European Union
Total population, 15 to 64 years old	100.0	100.0
Total employed	74.0	60.5
Agriculture	2.0	3.0
Industry	17.7	17.8
Services	54.3	39.7
Not employed	26.0	39.5

SOURCE: *Employment Performance in the Member States: Employment Rates Report 1998* (European Union Directorate–General for Employment, Industrial Relations and Social Affairs, Luxembourg,1999).

Table 2. Total employment and female employment rate for the United States and European Union, 1997

Sector	Employment rate		Female employment rate	
	United States	European Union	United States	European Union
Total	74.0	60.5	46.2	41.8
Agriculture, fisheries, and forestry	2.0	3.0	21.8	33.9
Industry	11.7	17.8	–	–
Mining, oil, and natural gas	.5	.3	14.4	10.4
Manufacturing	11.8	12.3	32.1	28.4
Electricity, gas and water	.7	.5	21.9	17.8
Construction	4.7	4.7	9.4	8.4
Services	54.3	39.5	–	–
Trade	12.1	9.1	41.9	45.4
Hotels and restaurants	5.4	2.5	53.7	52.5
Transport and communications	4.1	3.6	29.9	28.6
Finance and insurance	3.3	2.1	62.2	46.1
Business services and real estate	7.8	4.6	45.9	44.2
Communal services[1]	21.4	17.8	[2]54.2	[2]51.7

[1] Communal services includes public administration, education, health and social work, sanitary services, membership organizations, recreational activities, personal and other services, and private households.

[2] Unweighted average of 10 detailed services industries.

NOTE: Employment rate is the percentage of the working-age (16 to 64 years old) population employed. Dash indicates data not available. Industry categories are classified according to the European Community (NACE Revision 1) 2-digit sector.

SOURCE: *Employment in Europe, 1999* (European Commission, Directorate–General for Employment, Industrial Relations and Social Affairs, 1999).

for a larger share of the working-age population in the United States (46 percent), versus the share of women in the European Union (42 percent) in 1997. In the service sector, this difference was very narrow, except for that in the finance and insurance industry for which women accounted for a much larger share in the United States. (See table 2.)

Workers also can be distinguished by high, medium, or low skill levels in major industries. In agriculture and industry, there was no difference in the distribution of workers by skill level in the United States and the European Union. In services, however, there was a significant difference. A much higher share of U.S. workers in the service sector were low skilled, compared with their European Union counterparts. (See table 3.) The percentages of medium- and high-skilled workers in services were slightly higher in the United States.

This analysis revealed that compared with the proportion of the European Union population, a greater proportion of the U.S. population is working, especially in the service sector. A closer view showed that the higher proportion is diffuse throughout service industries. A greater proportion of U.S. women work, but the differences in service-sector industries are negligible. A much larger share of U.S. low-skilled workers are working, compared with the share in Europe, and a large percentage of low-skilled workers are in the service sector.

Closer view of U.S. job growth

Near the close of the 20th century, the number of jobs in the services industry, representing about 30 percent of all jobs, was twice the number in manufacturing.[8] In the current economic expansion, the longest in the last half of the 20th century, job growth in services was twice as high as its share of total employment. In other words, services accounted for more than half of the nearly 18-million job increase between 1991 and 1999.

To determine precisely where most of the job gains are originating and examine the role of new business creation, we can observe the top 10 three-digit SIC industries in the United States that have both a high level change and high percent change in the number of jobs over the 1991–99 period.[9] (See chart 1.) Seven of those industries are in services, led by personnel supply services (SIC 736) and computer services (SIC 737)—both of which more than doubled in number of jobs. Four of the top 10 industries pay more than the average wage—computer services (SIC 737), management and public

Table 3. Employment rates by skill category, 1997

Industry and skill category	United States	European Union
Total employment (In thousands)	175,108	246,263
Total employed (in percent)	74.0	60.0
High skilled	24.0	21.0
Medium skilled	28.0	25.0
Low skilled	22.0	14.0
Agriculture and industry		
Total	20.0	20.0
High skilled	4.0	4.0
Medium skilled	14.0	14.0
Low skilled	2.0	2.0
Services		
Total	55.0	40.0
High skilled	20.0	17.0
Medium skilled	15.0	11.0
Low skilled	20.0	12.0

NOTE: High skilled = high skilled nonmanual; medium skilled = medium skilled nonmanual and skilled manual; and low skilled = low skilled manual and nonmanual.

SOURCE: *Employment in Europe, 1999* (European Union Directorate–General for Employment, Industrial Relations and Social Affairs, 1999).

relations (SIC 874), mortgage bankers and brokers (SIC 616), and security brokers and dealers (SIC 621). Chart 1 also illustrates the change in the number of establishments between 1991 and 1996, which can be interpreted as a rough measure of entrepreneurship in the top 10 job growth industries. All of industries listed in the chart exhibited more than a 9-percent increase in new establishments, the average for all industries, indicating the importance of new establishments to job growth in these industries. Computer services, home health care services, mortgage bankers and brokers, and management and public relations services industries recorded a significantly large percent change of net new establishments.

The examination of all U.S. industries at the three-digit SIC level revealed that the lion's share of U.S. job growth in the current expansion occurred in services industries, with the birth of new establishments playing an important role. Also, services comprised a mix of low- and high-paying industries.

Importance of new companies

Early studies on the role of the births and deaths of firms/establishments concentrated on the U.S. manufacturing sector, because it was the only sector for which such data were available. The main findings from these studies include[10]:

- Large establishments and firms account for most newly created jobs
- Survival rates for jobs increase sharply with firm size
- Smaller establishments and firms have much higher gross job creation rates but not higher net creation rates
- The probability that a firm will fail decreases with age
- Age of establishment is more important for employment growth than size, and young establishments grow faster than old establishments
- Employment growth rates decline as firm size increases for establishments owned by a single-establishment firm, but increase in tandem with firm size for establishments owned by multi-establishment firms

Studies by the Small Business Administration in 1998 focused on the contribution of new, small firms by economic sector (agriculture, manufacturing, and services) to overall job creation.[11] Key findings of these studies, which focus on the services sector between 1990 and 1995, and build on—and confirm the results of—manufacturing-based studies include:

- Very small firms (those with fewer than 20 employees) created about half of the net new jobs; most of which were in the service sector
- Gross job flow rates—a measure of instability which is the sum of jobs created and dissolved, relative to average employment over a specific period—declined as the establishment aged
- The relationship between job flow rates and establishment age is stronger for single-unit establishments than it is for multi-unit firms
- Gross and net job creation declines as establishment size rises
- An increasing share of jobs created in services are in large firms, but this is not necessarily due to the higher growth rates in larger firms; smaller businesses growing into a larger establishment and acquisition of small firms by large firms are factors also

An international comparative study of job gains and losses covering basically the 1983–91 period showed that job gains from new establishments and job losses from establishment

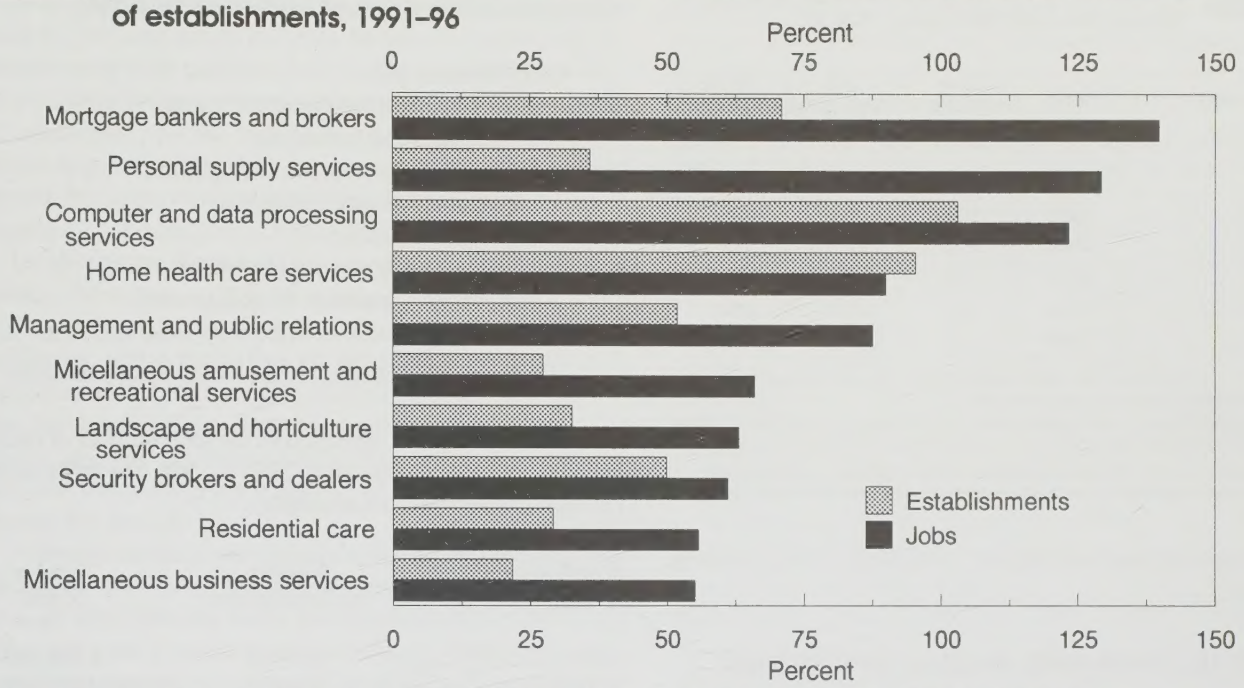
Table 4. Distribution of U.S. establishments by number of employees, selected years, 1946–97

Year	Total	1–19 employees	20–49 employees	50–99 employees	100–499 employees	500 employees or more
1946	100.0	90.5	5.7	2.0	1.5	0.3
1956	100.0	90.8	5.6	1.9	1.4	.3
1966	100.0	89.3	6.6	2.2	1.6	.3
1974	100.0	87.9	7.5	2.5	1.8	.3
1983	100.0	88.3	7.3	2.5	1.7	.2
1993	100.0	87.1	8.0	2.7	1.9	.2
1996	100.0	86.7	8.2	2.8	2.1	.2
1997	100.0	86.5	8.3	2.8	2.1	.2

NOTE: In 1974, the Census Bureau began to tabulate data as an establishment rather than as a reporting unit. In 1983, the Census Bureau began to tabulate data on firms' actions anytime during the year rather than in business at the end of the year.

SOURCE: County Business Patterns, Census Bureau, selected years.

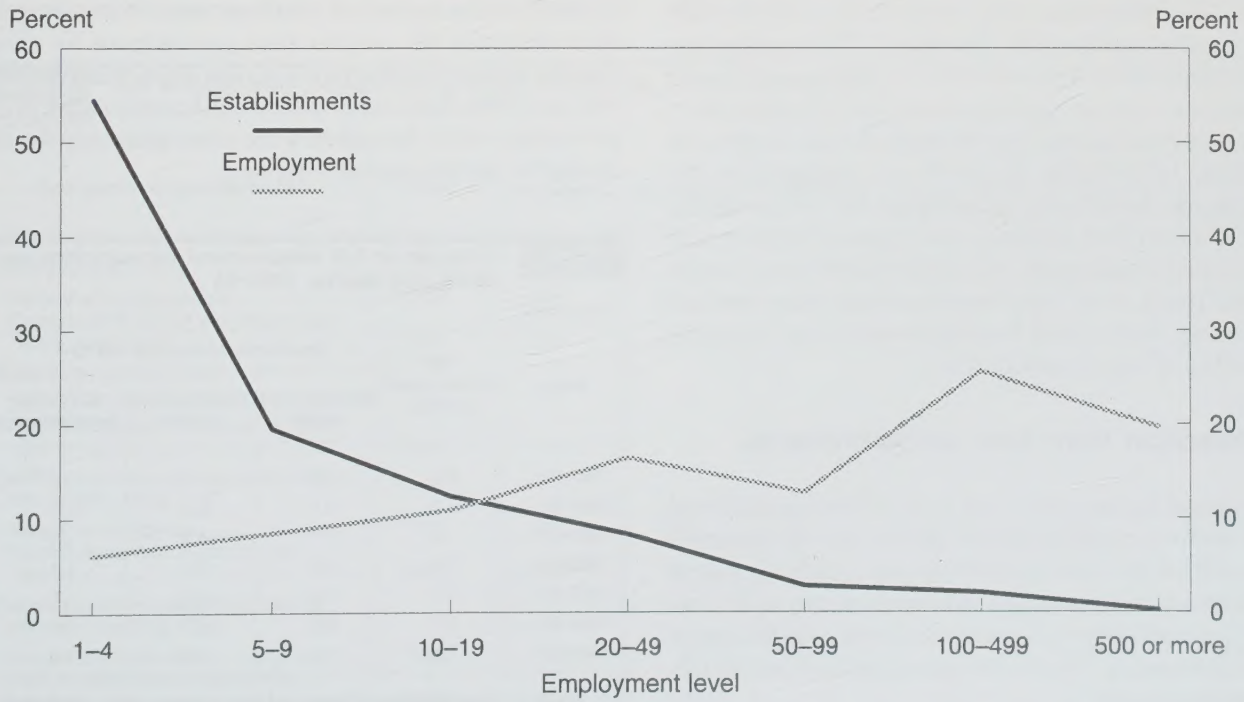
Chart 1. **Top-10 job growth industries in the United States, 1991–99 and the change in number of establishments, 1991–96**



NOTE: These are three-digit Standard Industrial Classification (SIC) industries, according to the *Standard Industrial Classification Manual, 1987* (Washington, Office of Management and Budget).

SOURCE: Bureau of Labor Statistics and Small Business Administration tabulations.

Chart 2. **Distribution of U.S. establishments and employment by employment level, 1997**



SOURCE: County Business Patterns, Census Bureau, 1997.

Table 5. Distribution of U.S. establishments by number of employees, selected years, 1974–97

Year	Total	1–4 employees	5–9 employees	10–19 employees
1974	100.0	58.6	18.0	11.3
1982	100.0	53.7	20.5	12.5
1983	100.0	57.4	19.4	11.5
1993	100.0	54.6	20.1	12.4
1996	100.0	54.9	19.5	12.3
1997	100.0	54.5	19.6	12.4

NOTE: In 1974 the Census Bureau began to tabulate data as an establishment rather than as a reporting unit.
In 1983, the Census Bureau began to tabulate data on firms' actions anytime during the year rather than in business at the end of the year.

SOURCE: County Business Patterns, Census Bureau, selected years.

closures were relatively higher in the United States than in Europe.[12]

Small business and employment growth

The level of entrepreneurship is often equated with small business.[13] Although trending downward slightly over the past 50 years, small business made up more than 85 percent of all establishments (employing less than 20 workers) in 1997. (See table 4.) Moreover, very small establishments (those employing less than five workers) still accounted for more than half of all establishments in 1997. (See table 5.) This conjures up a misleading picture of their importance to employment. Chart 2 illustrates a much more equitable distribution of employment, versus establishment size than the more skewed distribution data, based solely on the number of establishments by employment size. In fact, employment levels tend to rise slightly as establishment size increases—an important point to bear in mind when examining the role of new establishments in job creation. That is, even though there are many more small establishments, their share of total employment is not as significant as that of large establishments.

Job creation from new establishments

How many of the new jobs in the United States are attributed to new business creation? To help answer this, we can examine the role of new establishments in job creation by size of establishment and by detailed industry. Not only is job creation by size and industry important in determining the impact of entrepreneurship, but also the sustainability of newly created establishments.

The dynamic nature of the U.S. job market is revealed by examining changes in the number of establishments and in the number of persons employed due to establishment change. Establishment and employment changes are caused by:

- Establishment births
  - New firms and their establishments (original establishments)
  - New establishments in existing firms (secondary establishments)
- Establishment deaths
  - Deaths of original establishments
  - Deaths of secondary establishments
- Employment expansion in existing establishments
- Employment contractions in existing establishments

The following tabulation shows the total number of establishment and job changes from 1995 to 1996 (the most recent period for which data are available):

Establishment change	*Number of establishments*	*Number of jobs*
Births	697,460	5,908,300
Deaths	606,430	4,995,220
Expansion	1,714,600	10,284,770
Contraction	1,571,830	9,330,600

The number of jobs created from establishment births exceeded the number of jobs abolished due to deaths by about 915,000 and the number of jobs from establishment expansions exceeded the number from contractions by about 954,000, resulting in about a 1.9-million job increase between 1995 and 1996. This clearly reflects the dynamic nature of the job market, which is masked when examining only the net change for one time period to the next.

Table 6. Changes in U.S. employment by establishment births and deaths, 1989–96

[in percent]

Years	Net employment change	Employment change due to—		
		Establishment births	Establishment deaths	Continuing establishments
1989–90	2.0	5.8	–5.3	1.5
1990–91	–1.2	6.1	–5.3	–2.1
1991–92	.6	7.1	–5.8	–.8
1992–93	2.1	5.9	–5.2	1.4
1993–94	2.1	5.6	–5.2	1.7
1994–95	3.7	6.0	–4.7	2.4
1995–96	1.9	5.9	–5.0	1.0

SOURCE: *Small Business Growth by Major Industry, 1988–1995* (Washington, Office of Advocacy, U.S. Small Business Administration, 1998), table A–7, and on the Internet at: **http://www.sba.gov/ADVO/stats/dyn_us96.pdf**.

Establishment births and deaths and the business cycle. From 1989 to 1996 (a period covering the most recent business cycle peak in 1990 and trough in 1991) the behavior of existing establishments with regards to employment is clearly cyclical, as job cutbacks outnumbered job gains only during the 1990–92 recessionary period. In contrast, the birth of new establishments appears unrelated to the business cycle. Employment growth from new establishments remained between a 5.6-percent and 7.1-percent range from year to year. (See table 6.)

Establishment deaths, which were always a bit fewer than births, illustrated cyclical tendencies. This is in agreement with a study analyzing the U.S. and Canadian manufacturing industries, which found that job destruction was much more cyclical and volatile than job creation.[14] This is related to the fact that job dissolution is more concentrated because manufacturing plants are more likely to shutdown in recessionary periods; that is, they are more vulnerable to adverse shocks during this period.[15]

Although employment gains and losses in existing establishments dominated the overall employment year-to-year change, establishment births provided a steady stream of new jobs each year. It would be useful to know whether these new establishments were congregated in small firms or were more widely distributed.

Opening new establishments, versus expanding existing ones. Between 1995 and 1996, slightly more than a third of the jobs created were from the birth of new establishments. New companies, as an incubator for new jobs, did not change much in size, except for their lower share of new jobs in large establishments (500 or more employees). A partial explanation is a distinction between a new original company and an offshoot of an existing firm (like opening a new McDonald's). There were 5.9 million jobs created by the birth of establishments over the 1995–96 period—3.3 million from births of original establishments and 2.7 million from births of existing establishments. The share of jobs created in small and large companies differed dramatically between new establishments and offshoots of existing companies. (See table 7.) Nearly all of the jobs created by establishment births from offshoots were in large companies. In contrast, most of the jobs created by establishment births of original establishments were in small companies. That is, very few establishments start big. In the aggregate, moreover, far fewer jobs were created from births in large establishments (100 or more workers) than in smaller establishments.

Establishment deaths by size also differ dramatically by whether the establishment was initially created as an entirely new entity or as an offshoot from an existing company. Small new entities and large offshoots both have high death rates. This occurs for the latter because large companies open and close new establishments quickly, based upon short-term profits. Moreover, the difference in the death rate between small, new establishments and large offshoots probably is more a function of the age of the establishment than its size. Younger establishments have a higher risk of dissolution.

Establishment births and deaths vary by major industry and

Table 7. U.S. employment change due to births and deaths, by firm size, 1995–96

[In percent]

Change due to establishment—	Total	1–4 employees	5–9 employees	10–9 employees	20–99 employees	100–499 employees	500 employees or more
Births (from new firms):							
Percent of all jobs created	20.0	38.7	37.5	34.4	29.6	19.1	3.1
Percent distribution of jobs created by births of new firms	100.0	24.8	16.1	15.0	25.3	11.9	6.1
Births (from existing firms):							
Percent of all jobs created	16.4	.1	.2	.6	2.6	14.1	35.5
Percent of all jobs created by births of new firms	100.0	.1	.1	.3	2.7	10.8	85.9
Deaths (from firms not created by births from existing firms):							
Percent of all jobs lost	21.6	60.2	38.8	35.1	30.6	20.2	4.8
Percent distribution of jobs lost by deaths	100.0	21.4	14.5	14.3	26.7	13.6	9.4
Deaths (from firms created originally by births from existing firms):							
Percent of all jobs lost	13.2	.3	.6	1.4	3.9	22.1	25.5
Percent distribution of jobs lost by deaths	100.0	.2	.4	.9	5.6	12.1	80.8

SOURCE: On the Internet at: **http://www.sba.gov/ADVO/stats/int_data.html**.

size. Given the magnitude of the number of jobs created by the births of establishments, it is useful to examine the contrasts by industry. From 1990 to 1995, total employment rose as new jobs were created from establishment births and expansion, with the share from expansions being slightly higher.[16] The dominance of expansions verifies the results of previous studies that were for the most part based only on the manufacturing sector. Chart 3 and table 8 present data on net job creation by major industry divisions for the first half of the 1990s. The highest net job creation rate was in services, accounting for one-fifth of the job increase. What distinguishes the services industry from all other industries is its low death rate and high expansion rate among existing establishments. Viewed another way, a larger number of new service establishments survived and expanded over the 1990–95 period. In contrast, the manufacturing industry lost employment over the same period because establishment deaths exceeded births and employment contractions exceeded expansions among existing establishments. With the exception of manufacturing, all major industries recorded large birth rates of new establishments.

The magnitude and pervasiveness of job reallocation within and across industry sectors supports a study by Steven J. Davis, John Haltiwanger, and Scott Schuh, which concludes that idiosyncratic factors dominate the determination of which establishments create and destroy jobs, and which establishments grow.[17] This results from the considerable uncertainty that surrounds the development, adoption, distribution, marketing, and regulation of new products and production techniques. Many factors also influence whether an establishment succeeds or fails; prominent among them are the owner's initial capital investment, management ability, location, and age.[18] About 1 of 7 establishments go out of business annually. However, the survival rate more than doubles for firms that grow, and the earlier in the life of the business that growth occurs, the higher the chance of survival. Moreover, even a small amount of growth boosts the survival rate to where 2 of 3 growing firms survive.[19]

Small establishments (1 to 19 workers) are much more prevalent in services than in manufacturing. For example, there were about twice as many small establishments in services than there are in manufacturing in 1990, accounting for 24 percent of all services industry jobs, compared with 7 percent of manufacturing jobs. Moreover, the share of jobs created by establishment births in small firms (1 to 19 employees) was much higher in the services industry than in manufacturing. The following tabulation illustrates the percent distribution of jobs created from establishment births by establishment size and major industry from 1990 to 1995:

Establishment size	*Total*	*Manufacturing*	*Services*
Total employees	100.0	100.0	100.0
1–19 employees	26.6	16.8	25.8
20–499 employees	33.6	36.3	36.2
500 or more employees	39.9	46.8	38.0

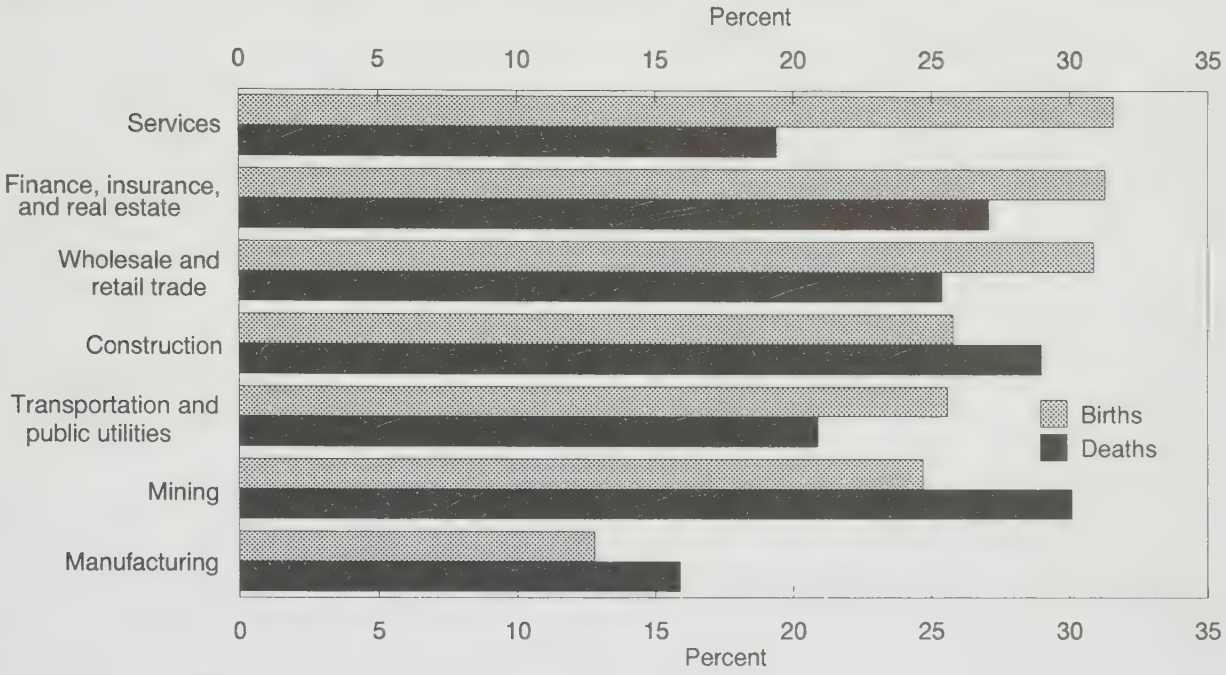
Net and gross job creation declined as establishment size increased for total employment in both the manufacturing and services industries from 1990 to 1995.[20] (See table 9.) This is in agreement with a study of job flow in services,[21] but not in agreement with other studies of such in manufacturing,[22] in

Table 8. Rates of Job changes from establishment births, deaths, expansions, and contractions by major U.S. private sector industry, 1990–95

Industry	Net job creation	Job change from establishment				Employment share
		Births	Deaths	Expansions	Contractions	
Total	7.3	26.9	–21.8	22.9	–14.9	100.0
Agriculture	14.6	33.2	–24.8	22.9	–16.7	.6
Mining	–10.2	24.7	–30.1	14.5	–19.3	.8
Construction	–3.7	25.8	–29.0	19.2	–19.7	5.6
Manufacturing	–3.6	12.8	–15.9	14.7	–15.2	20.5
Transportation and public utility	5.2	25.6	–20.9	17.8	–17.3	6.0
Wholesale and retail trade	6.2	30.9	–25.4	14.6	–14.0	28.0
Finance, insurance, and real estate	.2	31.3	–27.1	14.7	–18.6	7.5
Services	20.1	31.6	–19.4	21.2	–13.2	30.9

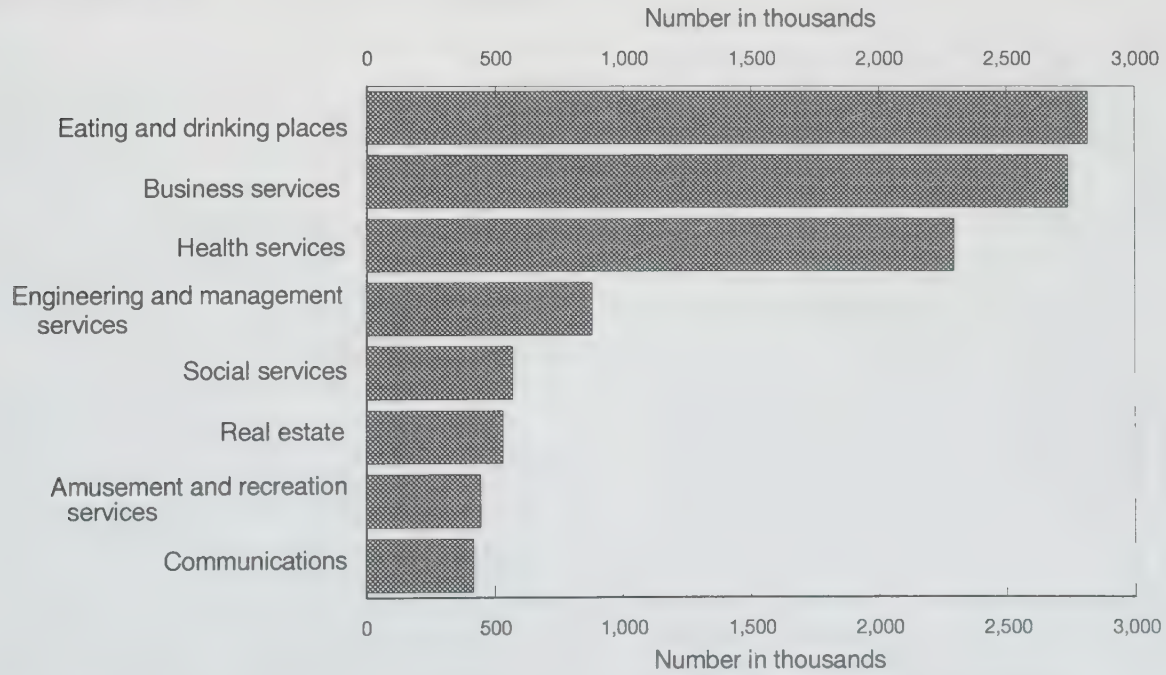
SOURCE: On the Internet at: **http://www.sba.gov/ADVO/stats/int_data.html.**

Chart 3. Rates of job changes from establishment births and deaths by major U.S. private-sector industry, 1990–95



SOURCE: On the Internet at: http:www.sba.gov/ADVO/stat/int_data.html.

Chart 4. Number of U.S. jobs created from establishment births by entrepreneurial industries, 1990–95



NOTE: These are two-digit Standard Industrial Classification (SIC) industries, according to the *Standard Industrial Classification Manual, 1987* (Washington, Office of Management and Budget).

Table 9. Rates of job creation and destruction by firm size and selected U.S. industry, 1990–95

Firm size and industry	Gross job creation	Net job creation	Gross job destruction
Total	7.3	44.0	–36.7
1–4 employees	36.8	83.6	–46.8
5–9 employees	13.8	55.9	–42.0
10–19 employees	8.2	48.7	–40.5
20–99 employees	5.3	44.3	–39.0
100–499 employees	7.0	44.0	–37.0
500 employees or more	3.7	36.6	–32.9
Manufacturing total	–3.6	27.5	–31.1
1–4 employees	48.8	98.2	–49.4
5–9 employees	21.8	63.3	–41.1
10–19 employees	12.6	49.2	–36.9
20–99 employees	3.8	37.3	–33.4
100–499 employees	–.6	30.5	–31.0
500 employees or more	–8.9	20.4	–29.2
Services total	20.1	52.7	–32.6
1–4 employees	41.8	82.3	–40.5
5–9 employees	18.5	54.2	–35.6
10–19 employees	15.8	51.9	–36.1
20–99 employees	17.7	53.3	–35.6
100–499 employees	19.4	53.8	–34.3
500 employees or more	18.8	46.2	–27.3

SOURCE: On the Internet at: **http://www.sba.gov/ADVO/stats/int_data.html**.

which smaller establishments had higher gross job creation rates, not higher net job creation rates. A recent study in the State of Maryland found no apparent pattern with respect to business size and net job creation.[23] Perhaps the reason for the discrepancy is that the earlier studies analyzed manufacturing over a longer period of time and during periods when manufacturing employment was growing. Differences could also arise from using initial employment or average employment for the period as the base point, or from examining a different geographical area. Gross job destruction also declined as establishment size rose for total employment and in both the manufacturing and services industries.

In the services industry, net job creation, gross job creation, and gross job destruction did not vary much by establishment size, except for very small establishments (employing 1 to 4 workers), which had much higher rates. This indicates the significance of entrepreneurship in services industries as well as the precariousness of sustaining new establishments.

Top entrepreneurial industries. Previous sections of this article have demonstrated that the service sector was very important to U.S. job growth in the 1990s and that entrepreneurship through the birth of new, small establishments played an integral part. To analyze the role of entrepreneurship in this growth, an examination of job growth at the two-digit SIC industry level was undertaken in a manner that relates job creation and entrepreneurial activity. Entrepreneurial industries were selected on the basis of three criteria:

1. Number of jobs created by establishment births is greater than average
2. Ratio of births to deaths of establishments is greater than the rate for all industries
3. Ratio of the jobs created by establishment births to jobs lost by establishment deaths is greater than or equal to the ratio for all industries

Application of these criteria to all two-digit SIC industries yielded the eight entrepreneurial industries listed in chart 4. Overall, these eight entrepreneurial industries created almost half (43 percent) of all the jobs created by establishment births over the 1990–95 period. Most of those jobs (5 of 8) are in the services industry. For example, business services (SIC 73), health services (SIC 80), and eating and drinking places (SIC 58) each generated more than 2 million jobs by creating new establishments during that period. Engineering and management services followed with 880,000 jobs in new establishments. To help identify where entrepreneurial activity is likely to be the highest, the following tabulation presents the eight entrepreneurial industries and their constituent three-digit SIC industries that recorded a sizable number of new jobs from establishment births over the 1990–95 period:

SIC	*Industry*	*Number of jobs created from establishment births*
58	Eating and drinking places	2,818,000
73	Business services	2,741,000
726	Personnel supply services	1,299,000
737	Computer services	428,000
738	Miscellaneous business services	440,000
80	Health services	2,295,000
801	Offices or clinics of doctors	406,000
806	Hospitals	750,000
87	Engineering and management services	879,000
874	Management and public relations services	338,000
83	Social services	569,000
65	Real estate	531,000
79	Amusement and recreation services	445,000
48	Communications	418,000
481	Telephone communications	289,000

While microdata were not readily available, it is still possible to track the behavior of individual establishments over time to determine their expansion and survival rates based on aggregate data. For example, we know for a given period the number of establishments born and the number that were dissolved. Some of the establishments that went out of business could have been started outside of the time period under analysis. However, we do know that recently started establishments are more likely to fail or dissolve than older ones. So, our ratios of births and deaths of establishments and of jobs are very crude estimates of survival rates. Although we do not know what happened to individual establishments and jobs in the social services industry (SIC 83), for example, we know that twice as many establishments and jobs were created through births than died over the 1990–95 period; that is, they survived. If the birth-death establishment ratio (criteria number 2) is higher than the employment ratio (criteria number 3), it means that smaller rather than larger establishments are likely to survive in that industry. This is the case in engineering and management services (SIC 84) and communications industries (SIC 48). An examination of establishment births and deaths by firm size in these industries reveals that the surviving establishments are typically mid-size (those with 100–499 employees). In business services (SIC 73), large firms (500 or more employees) appear to flourish.

New business developments in Europe

Unfortunately, data similar to the United States—which track businesses and measure their employment levels—are not available for European countries. Recently, however, Eurostat has provided figures on a number of enterprises and their employment levels in consecutive years 1994–95. This is part of a larger Eurostat project, in cooperation with national statistical agencies, to build a European statistical system on small- and medium-size enterprises. This statistical system constitutes the most complete and compatible source of information on European enterprises, especially on business start-ups, which is available for 10 countries.

Enterprise creations and closures for the 10 countries are quite diffuse. (See table 10.) Enterprise creations (11.3 percent) exceeded closures (9.9 percent) for the countries with data reporting for 1994–95. During this time, a total of 1,668,000 enterprises were created and 1,375,000 were closed in the nine countries reporting both creation and disclosure figures. The vast majority of these new enterprises was very small (less than four employees), and most of these enterprises consisted of one-person operations in the trade, hotel and restaurants, and the services industries. However, enterprise closures exceeded creations in the trade and hotel and restaurant industries for all countries reviewed, whereas more enterprises were created than those that were closed in services industries, especially business services and communication services.

Table 10. Enterprise creations and closures in selected European Union countries, 1994–95

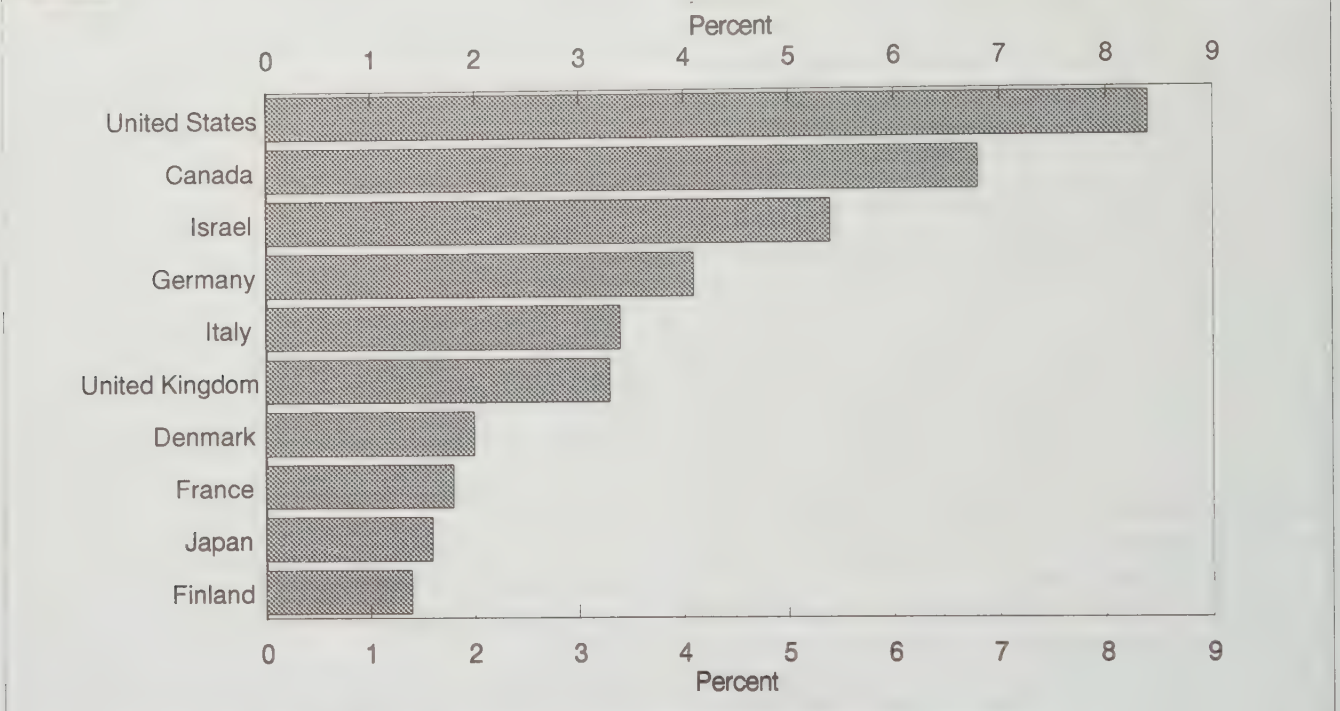
Country	Year	Creation		Closure	
		Number (in thousands)	Rate	Number (in thousands)	Rate
Denmark	1994	16	6.6	–	–
Germany	1995	528	–	407	–
Spain	1995	365	15.3	284	11.9
France	1995	285	12.1	254	10.8
Italy	1996	287	8.1	270	7.7
Netherlands	1994	25	6.4	15	3.9
Portugal	1994	96	14.7	85	13.1
Finland	1995	31	14.6	23	10.8
Sweden	1995	51	12.4	37	9.0
United Kingdom	1995	161	11.2	170	11.8

SOURCE: *Enterprises in Europe, 1999* (Luxembourg, European Commission, Enterprise Policy, 1999).

Eurostat enterprise data also track the size of businesses to see if the size of enterprises increased or decreased from the previous period. Of the small- and medium-sized enterprises—defined as those having 1 to 249 employees—a considerable number consisted of one-person businesses in the 1994–95 period that did not exist in the previous year. Moreover, very few small- and medium-size enterprises were the result of large firms that had shrunk. Between about 20 percent to 30 percent of the existing one-person businesses were not present the previous year, reflecting the high creation rates of sole proprietorships.

Within the framework of the Eurostat enterprise births and deaths project, detailed employment data are now available for France, the Netherlands, Austria, Portugal, Finland, Sweden, and the United Kingdom. Analysis of these data by enterprise births and deaths and enterprise expansions and contractions reveal wide variation across countries. Overall, however, it appears that the net effect of enterprise creation and closure on employment is relatively small in relation to the total number of jobs concerned. The performance of existing enterprises appears to be critical for employment growth, and entrepreneurs setting up new, successful businesses provide the base for further growth. Employment growth in the service sector was slightly more favorable than that in other sectors in the

Chart 5. Percent of adults participating in entrepreneurial activity in selected countries, winter, 1999



NOTE: Entrepreneurial activity is defined as any attempt to start a new business or expand an existing one.

SOURCE: Global Entrepreneurship Monitor, 1999.

early 1990s; very small enterprises contributed the most to this expansion, relative to their employment share.

Entrepreneurial activity

A recently completed study of entrepreneurship—the Global Entrepreneurship Monitor study—examined the relationship between entrepreneurial activity and economic growth internationally. It made a notable effort to ensure comparability among the data for 10 countries (the United States, Canada, Israel, Germany, Italy, the United Kingdom, Denmark, France, Japan, and Finland).[24] The study defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business." Data were collected from multiple sources, but the main source was survey of a representative sample of 1,000 adults in each country. Respondents were asked whether they were currently starting a firm on their own or for their employer as part of their job. Those who answered yes to either or both were considered "nascent entrepreneurs."

Entrepreneurial activity varied widely by country, ranging from 1 of 12 adults in the United States to 1 in 71 adults in Finland. (See chart 5.) Based on this information, entrepreneurial activity in the 10 countries was classified into the following categories: high (United States, Canada, and Israel); medium (Germany, Italy, United Kingdom, and Denmark); and low (France, Japan, and Finland). The survey results indicate that a higher rate of entrepreneurial activity appears to be positively related to economic growth, emphasizing its importance in a country's quest to compete successfully in the global economy.[25]

According to the Global Entrepreneurship Monitor project, there are six factors that are most important in fostering entrepreneurial activities:

- Entrepreneurial opportunity
- Entrepreneurial capacity
- Infrastructure
- Demography (age structure, female entrepreneurs, and population growth)
- Education
- Culture

In countries with high entrepreneurial rankings, such activity was an integral and accepted feature of everyday life, and the number of female entrepreneurs was high, as is the case in the United States. Higher entrepreneurial activity also is related to the capacity of a country's society to accommodate higher levels of income disparity. For example, the difference in family income between the lowest and the highest in the United States is wider than in most other developed countries.

Another important cultural or structural feature of high-ranking entrepreneurial activity is the shift of capital control. For example, in the United States, available capital has moved from banks to public markets, making the process of starting a business more forward-looking and democratic. In addition, entrepreneurs are no longer limited to receiving capital from a few institutions. Wall Street companies now routinely issue high-yield securities for high-risk ventures—termed "below investment grade." A very telling statistic is the different levels of investment in the United States and Europe: in 1998, only 17 percent of Europe's fixed-income issues were below investment grade (those considered high risk), compared with 60 percent of the issues in the United States.[26]

Who are these entrepreneurs? The Global Entrepreneurship Monitor study found that the largest share of entrepreneurs were men, ages 25 to 54, although there was also a notable percentage of young men and women (18 to 24 years) involved in start-ups.[27] A U.S. study of young entrepreneurs found that more than 1 of 4 young men and 1 of 5 young women became self-employed in the 1980s. Female entrepreneurs overwhelmingly engaged in services industries and around a third of them had engaged in such activity for at least 3 years.[28]

Moreover, the Global Entrepreneurship Monitor study concluded that most countries would have to increase the participation of women in the entrepreneurial process if they wanted to achieve higher start-up rates.

IN SUMMARY, entrepreneurship, or the birth of new establishments, is important to job growth in the United States, but not as important as job expansion in existing firms, confirming previous studies that narrowly focused on the manufacturing sector. However, small establishments (1 to 19 workers) play a much larger role in job growth in the services industry than they do in manufacturing industries in the United States. Moreover, new establishments in the services industry were more likely to survive than those did in manufacturing. U.S. and European Union establishment birth data are not really comparable, but a special survey of adults found that entrepreneurship was much higher in the United States than in Europe. Also, Europe was characterized by a significantly smaller percentage of the working-age population employed, especially in low-skilled service sector jobs. □

Notes

[1] The European Union consists of the following countries: Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, and the United Kingdom.

[2] Dun and Bradstreet Corporation also tabulates the opening and closing of U.S. establishments and tracks their employment level over time. However, research suggests that these data overstate the actual number of openings and closures.

[3] See Paul Reynolds, Michael Hay, and S. Michael Camp, *Global Entrepreneurship Monitor, 1999*, Executive Report (Ewing Marion Kauffman Foundation, Center for Entrepreneurial Leadership, 1999).

[4] For an excellent description and documentation of the Longitudinal Establishment and Enterprise Microdata database, see Zoltan Acs and Catherine Armington, *Longitudinal Establishment and Enterprise microdata LEEM Documentation* (Center for Economic Studies, U.S. Census Bureau, 1998).

[5] For the analysis of the sectoral composition of employment, U.S. data for this section have been transformed to match those compiled in the European Union, which are classified according to the Statistical Classification of Economic Activities in the European Community (NACE Revision 1).

[6] Industry includes mining, construction, and manufacturing, the typical international comparative definition.

[7] Under the NACE Revision 1 industry classification scheme, communal services include: public administration, education, health and social work, sanitary services, membership organizations, recreational activities, personal and other services, and private households.

[8] It should be noted, however, that through new technologies and other productivity-enhancing techniques, manufacturing's share of total output has slipped only slightly from around 30 percent since 1972, while the services industry's share has crept up from 14 percent to 18 percent. That is, manufacturing's role in the overall economy has remained important even though its job count has dwindled significantly.

[9] The Standard Industrial Classification System (SIC) is a U.S. classification system used to identify all establishment-based industries or government establishments. For more information, see *Standard Industrial Classification Manual, 1987* (Washington, Office of Management and Budget).

[10] John Haltiwanger, and C. J. Krizan, "Small Business and Job Creation in the United States," in Zoltan J. Acs, ed., *Are Small Firms Important?* (Norwell, Massachusetts, Kluwer Academic Publishers, 1999); Steven J. Davis, John Haltiwanger, and Scott Schuh, "Small Business and Job Creation: Dissecting the Myth and Reassessing the Facts," *Labor Markets, Employment Policy, and Job Creation*, 5, 1994; Steven J. Davis, John Haltiwanger, and Scott Schuh, *Job Creation and Destruction* (Massachusetts, MIT Press, 1997); Timothy Dunne, Mark Roberts, and Larry Samuelson, "Plant Turnover and Gross Employment Flows in the U.S. Manufacturing Sector," *Journal of Labor Economics*, July 1989; Timothy Dunne, Mark Roberts, and Larry Samuelson, "The Growth and Failure of U.S. Manufacturing Plants," *Quarterly Journal of Economics*, vol. 104, 1989; and D. Evans, "The Relationship between Firm Growth, Size and Age: Estimates for 100 Manufacturing Industries," *Journal of Industrial Economics*, vol. 15, 1987.

[11] *Small Business Growth by Major Industry, 1988–1995* (Washing-

ton, Small Business Administration, Office of Advocacy, 1998); and *Mergers and Acquisitions in the United States, 1990–1994* (Small Business Administration, Office of Advocacy, Washington, 1998).

[12] "Job Gains and Job Losses in Firms," *Employment Outlook* (Paris, Organisation for Economic Co-operation and Development (OECD), 1994).

[13] Reynolds, Hay, and Camp, *Global Entrepreneurship Monitor, 1999.*

[14] John Baldwin, Timothy Dunne, and John Haltiwanger, "A comparison of job creation and job destruction in Canada and the United States," *Review of Economics and Statistics*, vol. 80, 1998.

[15] Robert E. Hall, "The Concentration of Job Destruction," NBER Working Paper no. W7025 (New York, National Bureau of Economic Research, 1999).

[16] Some of the growth of employment in large firms (100 or more employees) over time results from expanding small firms moving to a larger size category. Of the total number of jobs in 1990 that survived to 1994 (76 million), 96 percent remained in small establishments (less than 100 employees), while 4 percent of the jobs were in establishments that were acquired by large firms or in establishments that expanded into the large-firm size category. See Small Business Administration and Executive Office of the President, "New Data for Analysis for Small Business Job Creation," *The State of Small Business: 1999* (Washington, 1999), chapter 2.

[17] Davis, Haltiwanger, and Schuh, *Job Creation and Destruction*, 1997.

[18] Bruce Phillips, "The Influence of Industry and Location on Small Firm Failure Rates," *Frontiers of Entrepreneurship Research 1993, Proceedings of the Thirteenth Annual Babson College Entrepreneurship Research Conference* (Babson Park, MA, 1993).

[19] Bruce Phillips and Bruce A. Kirchhoff, "Formation, Growth and Survival; Small Firm Dynamics in the U.S. Economy," *Small Business Economics*, vol. 1, 1989, pp. 65–74.

[20] Preliminary data for 1994–98 showed the same inverse relationship between firm size and net job creation. When comparing the late 1990s with the early 1990s, however, net job creation was much higher in the 1994–98 period in very small firms (1–4 employees) and it was negative among very large firms (500 or more employees), mainly as a result of firm deaths. Unpublished data from Bruce Phillips, Small Business Administration, June 1999.

[21] Acs, and Armington, *Job Flow Dynamics in the Service Sector* (Washington, Center for Economic Studies, Census Bureau, 1999).

[22] Davis, Haltiwanger, and Schuh, "Small Business and Job Creation;" Steven J. Davis, and John Haltiwanger, "Gross Job Creation, Gross Job Destruction, and Employment Reallocation," *Quarterly Journal of Economics*, vol. 107, 1992; Dunne, Roberts, and Samuelson, "Plant Turnover and Gross Employment Flows;" Dunne, Roberts and Samuelson, "The Growth and Failure of U.S. Manufacturing Plants;" and Evans, "The Relationship between Firm Growth, Size and Age."

[23] David Stevens and Julia Lang, "Small Business Employment Dynamics Revisited," *The Dubious Benefits of Small Business for Job Growth and Wages* (Washington, Economic Policy Institute, 1998). Bruce Phillips argued that Stevens and Lang used an inappropriate database for analyzing the relationship between job creation and business size; they used quarterly unemployment insurance reports where establishments are not clearly distinguished. See Bruce Phillips, Comments on the Economic Policy Institute's *The Dubious Benefits of Small Business for Job Growth and Wages*, Unpublished, 1998.

[24] See Reynolds, Hay, and Camp, *Global Entrepreneurship Monitor, 1999.*

[25] A correlation of 0.61, which was marginally significant ($p = 0.08$), was reported between start-up rates and economic growth in the Global Entrepreneurship Monitor study.

[26] Michael Milken, "Prosperity and Social Capital," *The Wall Street Journal*, June 23, 1999. For a number of countries, the Milken Institute has developed a "capital access index," which measures the ease of raising capital. The United States ranks first at 100.0, followed by Switzerland (97.3) and Hong Kong (94.4). The European Union ranges from 94.0 for the United Kingdom to 46.3 for Greece. The average for the European Union (less Luxembourg for which no figure was available) was 75.0. See Glenn Yago, Lalita Ramesh, Dan Brumbaugh, and James Barth, *Captial Access Index* (Santa Monica, CA, Milken Institute, May 1999).

[27] See Reynolds, Hay, and Camp, *Global Entrepreneurship Monitor, 1999.*

[28] Bradley R. Schiller, and Philip Crewson, *Entrepreneurial Origins: A Longitudinal Inquiry* (Washington, Small Business Administration, Office of Advocacy, 1994.)

Gauging the labor force effects of retiring baby-boomers

As aging baby-boomers begin retiring, the effects on the overall economy and on certain occupations and industries will be substantial, creating a need for younger workers to fill the vacated jobs, many of which require relatively high levels of skill

Arlene Dohm

As the oldest baby-boomers begin retiring in the next several years, the implications for the workforce could be enormous. The current tight labor market situation could be exacerbated, hindering prospects for economic growth and putting a greater burden on those remaining in the workforce, perhaps forcing them to work longer hours. Especially in occupations with functions less conducive to technology-driven productivity innovations—many of the jobs in health services and educational services, for example—service may suffer and needs could go unmet unless older workers can be retained or other sources of workers can be found. Even in occupations where technological innovations have produced relatively large productivity gains—many of the more complex machining jobs in manufacturing, for example—the learning curves often are steep, meaning that new workers need to enter these occupations soon, so they can become proficient in the necessary skills by the time the baby-boomers begin leaving the labor force. This article looks at the occupations and industries likely to be most affected when the oldest baby-boomers begin retiring.

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The aging labor force

The baby boom began in 1946 and continued through 1964. During those 19 years, 76 million people were born. The sheer magnitude of the number of births during this period has had a major impact on many aspects of our economy over the last 50 years. It also has largely determined the size and age composition of the labor force for the past 30 years. In 1978, when baby-boomers were aged 15 to 32, they made up approximately 45 percent of the labor force. Now, in large part reflecting the aging of the baby-boomers, the percentage of workers aged 45 and older will increase from 33 percent of the labor force in 1998 to 40 percent in 2008, adding nearly 17 million workers to this age group. Over the same period, those aged 25 to 44 will decline as a percentage of the labor force—from 51 percent to 44 percent, resulting in 3 million fewer workers in this age bracket. Consequently, the median age of the labor force will rise from 38.7 in 1998 to 40.7 in 2008.[1]

As the age of the labor force increases, a greater number of people will leave the labor force due to death, disability, or retirement. Of the 25 million people projected by the Bureau of Labor Statistics to leave the labor force between 1998 and 2008, 22 million will be aged 45 years or older and thus will be leaving mostly to retire. The total number of people who left the labor force the previous decade was 19 million. Over the 1998–2008 period, the oldest baby-boomers will be aged 52 to 62. After 2008, as more and more baby-boomers reach retirement age, the impact of their retirements will continue to grow.

Three methods are often cited for determining the average age of retirement. The first method uses

a simple model to estimate the average annual number of net exits or withdrawals occurring over a given period within a particular age cohort. Using this "cohort method," Murray Gendell concluded that, from 1990 to 1995, the average age of retirement in the United States was 62.2 years for men and 62.7 years for women.[2] The second method relies on determining the average age for first withdrawal of a Social Security pension check. The Social Security Administration states that in 1998 the average age for first withdrawal of a pension check was 63.8 years for men and 64.0 years for women. However, about 50 percent of men and 53 percent of women made their initial claims at age 62.[3] Finally, a third method of estimating the average age of exit from the labor force involves examining labor force participation rates among older workers by single years of age. With this method, the average age of exit is defined as the age at which half the population is in the labor force and half is not in the labor force. In 1999, the average age at exit from the labor force was between 61 and 62 years. (At age 61, about 47 percent of the population was not in the labor force; at age 62, about 55 percent of the population was not in the labor force.)[4]

The "retirement" age, as calculated using these methods, has remained fairly stable over the last 20 years, although there are signs that it may be starting to increase. BLS projects that labor force participation rates for those aged 55 years and older will increase by 5.5 percentage points from 1998 to 2008.[5] For a number of reasons, including changes to Social Security, this trend should continue. By congressional mandate, beginning in 2000, the normal retirement age for collecting a *full* Social Security pension will increase by gradual increments from its current level of 65 years and 2 months to 67 years in 2022. At the same time, the amount of reduced pension benefits one can collect at age 62 also will be lowered. In addition, Congress recently eliminated the earnings limit on the amount that Social Security recipients between the ages of 65 and 69 can earn before having to forfeit part of their Social Security benefits. Together, these rule changes should keep people in the workforce longer.

Another reason the retirement age is likely to rise in the future is the trend toward companies offering *defined contribution* pension plans instead of *defined benefit* plans. A BLS survey of medium to large employers showed that, among full-time employees, participation in defined benefit pension plans declined from 59 percent in 1991 to 50 percent in 1997.[6] Defined benefit plans provide the maximum benefits when taken at the earliest possible age of eligibility. In contrast, under defined contribution plans (such as 401(k)s), the amount of benefits accrued depends on the amount contributed to the plan by employers and employees, as well as on the rate of growth of the investments in the retirement fund.

A study by the American Association of Retired Persons (AARP) provides further evidence of prolonged labor force participation, finding that 8 in 10 baby-boomers plan to work during their "retirement years," although not necessarily at the same job and not necessarily full time.[7] Declining age discrimination and increasing labor force participation among women also should contribute to raising the retirement age in the future. To the extent that these changes occur and the retirement age rises, the BLS estimates may overstate the number of retirements occurring over the 1998–2008 period.

Evidence from the BLS Current Population Survey (CPS) reveals a number of interesting details about the gender composition of older workers.[8] For example, men's labor force participation rates peak at 94 percent, while those of women peak at only 79 percent. At age 55, when many government and some union workers are eligible to receive pensions, participation rates were 83 percent for men in 1999, and 66 percent for women. At age 62, 53 percent of men were still in the labor force, compared with only 38 percent of women. Finally, at age 65, only 29 percent of the population was still in the workforce—36 percent of men and 22 percent of women. These statistics suggest that women leave the workforce after age 55 more rapidly than men. As a result, occupations employing large numbers of women can expect to have, on average, higher retirement rates at earlier ages than predominately male occupations.

The data

This study examines CPS data on occupation and age from 1998 and 1999; it also uses BLS projections data to estimate the number of retirements expected to occur over the 1998–2008 period. Of the approximately 500 occupations included in the CPS, only those that had a greater-than-average proportion of workers aged 45 and older were included in the study. Because in the average occupation, slightly less than 34 percent of its employees are aged 45 years and older, only occupations with 34 percent or more workers aged 45 years and older were considered. This age group was selected because persons aged 45 in 1998 will be 55 in 2008, and thus will be eligible for retirement under a number of plans.

Only occupations with more than 50,000 total employees are described, because the data for occupations with fewer employees were deemed less reliable. This last criterion eliminated approximately 30 occupations with older-than-average workforces. Some of the more common occupations deleted from the analysis because of their size include tailors, firefighting occupations, funeral directors, actuaries, telephone line installers, geologists, purchasing managers, optometrists, veterinarians, podiatrists, stevedores, urban planners, petroleum engineers, boilermakers, aircraft mechanics, a variety of repairers, and some metalworking machine operators. A number of other occupations that would not have met the size requirement on their own, but that were homogeneous enough to be considered as a group, were combined into five aggregated occupations: rail transportation

occupations; water transportation occupations; teachers, college and university; fishers, hunters, and trappers; and supervisors, construction occupations. The aggregate group rail transport occupations, for example, comprises locomotive operating occupations and railroad conductors and yardmasters. In addition, college and university teachers, normally listed by 30 different specialty occupations, here are included under the combined group teachers, college and university. An additional 20 occupations were excluded because replacement data are not available for them. Finally, a number of nonspecific or miscellaneous occupations were excluded. After these restrictions, 102 occupations were researched for this study.

Table 1 lists the occupations having the largest percentage of workers aged 45 years and older, along with the median age for each occupation. There are a number of reasons that these occupations have older workforces. Many of them are made up of supervisory or managerial employees, who normally are older than frontline employees. Within executive, administrative, and managerial occupations, for example, 41 percent of employees are 45 or older. Another reason is that, due to obsolescence, productivity improvements within the occupation, or difficulty in hiring and recruiting, many of the occupations listed in the table are declining in employment—which means fewer younger workers coming into the occupations, leaving a workforce that is older than average. Many of the clerical and manufacturing jobs on the list fall into this category. As workers retire from these declining occupations, many will not be replaced. Such occupations include farmers, millwrights, dressmakers, rail transportation occupations, and tool and die makers.

Professional occupations also have a disproportionate number of older workers, particularly those requiring postgraduate degrees. The opportunity costs for these high-wage earners leaving the labor force is greater than for most other occupations. Also, many of them are self-employed and thus are better able to control their schedules as they get older. In a study that looked at the labor force withdrawal patterns of a group of older workers, Joseph Quinn and his coauthors found a strong positive correlation between self-employment and delayed retirement, and a slightly positive correlation between education and delayed employment.[9] Self-employed workers often retire later because they lack pension plans. More educated workers also have a tendency to stay in their careers longer, due to greater job satisfaction and the costs of lost income in leaving the job, as well as other factors. At the same time, however, these workers often have better pension and health benefits than other workers, enabling them to retire younger. Occupations falling into this category include dentists and psychologists.

Some of the occupations listed in table 1—such as real estate sales occupations, bus drivers, and taxi drivers—have a large number of part-time workers. Older workers often take part-time jobs to supplement their retirement earnings or as a

Table 1. Occupations in 1998 with the highest percentage of workers aged 45 years and older

Occupation	Total employed (in thousands)	Percent of employed 45 years and older	Median age
Total, all employees	131,995	33.7	39
Farmers, except horticultural	946	68.5	53
Construction inspectors	71	60.6	49
Real estate sales occupations	753	59.8	49
Administrators and officials, public administration	632	58.7	47
Clergy	327	56.9	48
Millwrights	83	56.6	46
Librarians	209	56.5	47
Administrators, education and related fields	754	56.1	47
Bus drivers	474	54.2	47
Dressmakers	68	52.9	46
Dentists	156	51.3	45
Stationary engineers	130	50.8	45
Teachers, secondary school	1,228	50.3	45
Counselors, educational and vocational	231	50.2	45
Managers, properties and real estate	521	49.9	45
Psychologists	233	49.4	45
Crane and tower operators	67	49.3	45
Management analysts	443	49.0	45
Telephone installers and repairers	232	48.7	45
Authors	130	48.5	45
Private household cleaners and servants	555	48.3	44
Inspectors and compliance officers, ex. construc.	238	47.5	44
Tool and die makers	135	46.7	44
Taxi cab drivers and chauffeurs	275	46.5	44

Table 2. Occupations with the greatest replacement needs for those retiring, 1998–2008

[In thousands]

Occupation	Retiree replacement needs
Total, all employees	22,205
Secretaries	519
Truck drivers, heavy	425
Teachers, elementary school	418
Janitors and cleaners	408
Teachers, secondary school	378
Registered nurses	331
Bookkeepers, accounting and auditing clerks	330
Teachers, college and university	195
Administrators, education and related fields	178
Farmers, except horticultural	175
Supervisors, construction occupations	165
Administrators and officials, public administration	143
Real estate sales occupations	144
Insurance sales occupations	135
Industrial machinery repairers	125
Maids and housekeeping cleaners	122
Private household cleaners and servants	112
Physicians	108
Financial managers	102
Lawyers	99

way of staying productive in their older years without the stress of a full-time job. Other occupations listed in the table have a large percentage of older workers due to a lack of hiring in the recent past, resulting from downsizing or a temporary oversupply—in some cases, even when the occupation is projected to grow in the coming period. Teachers are an example of an occupation for which the demand tapered off in the 1980s (due to a declining birth rate during the 1970s), leaving a workforce that is older than average.

Some occupations have more older workers because they are highly unionized and thus favor seniority and generally have lower turnover rates due to higher wages and better benefits than nonunion jobs. Airline pilots and rail transportation occupations are examples of occupations with large proportions of unionized workers. Some occupations are simply less attractive to younger workers—even though jobs are available and demand for workers may be high. An example of an occupation experiencing difficulty attracting young qualified workers is that of tool and die makers.

Affected occupations and industries

How many job openings will retirements generate, and in which occupations and industries? BLS calculates net separations for each occupation in developing data on replacement needs. The number of net separations approximates the number of people permanently leaving an occupation and is measured by examining the net flow of individuals entering and exiting the occupation. For occupations that are growing or maintaining their employment level, replacement needs are equal to the number of workers leaving an occupation. For occupations that are declining, replacement needs are equal to the number of workers leaving the occupation less those that will not be replaced.[10] This study examines replacement needs or job openings generated by those who are projected to permanently leave an occupation over the 1998–2008 period.

The investigation focuses only on those aged 45 years and older and assumes that the vast majority of these workers will leave the occupation to retire. Although persons aged 45 and older occasionally change jobs or leave and reenter the workforce at a later time, for this article, it is assumed that the number is quite small. In the future, with the increasing portability of pension plans, movement into and out of occupations may become more common among older workers. At this time, however, with defined benefit pension plans still prevalent, movement between jobs generally is not voluntary and workers retire at the earliest possible time.

Table 2 lists the top 20 occupations that will have the greatest replacement needs due to persons aged 45 and older leaving the occupation from 1998 to 2008. Because the majority will be leaving the labor force to retire, they are referred to here as retirees. The occupations listed in the table are large occupations with workforces that are older than average. Among these occupations, five are in the education field, including three teaching occupations, as well as janitors and cleaners (most or whom work in schools), and education administrators. The reason for this is that many public education workers, like most workers in government, can retire

Table 3. Occupations with the greatest percentage of workers aged 45 and older permanently leaving the occupation, 1998–2008

Occupation	Percentage of workers permanently leaving occupation
Total, all employees	53.8
Fishers, hunters, and trappers	80.5
Water transportation occupations	76.7
Operations and systems researchers and analysts	74.2
Supervisors, police and detective	70.9
Telephone installers and repairers	69.6
Insurance underwriters	68.6
Supervisors, mechanics and repairers	68.3
Laundering and dry cleaning machine operators	67.7
Teachers, secondary school	66.8
Supervisors, construction workers	65.9
Mail carriers, postal service	65.8
Rail transportation occupations	65.2
Welfare service aides	65.1
Winding and twisting machine operators	64.9
Dental laboratory and medical appliance technicians	64.7
Public relations specialists	63.7
Telephone operators	62.4
Industrial machine repairers	60.4
Rail transportation occupations	60.6
Licensed practical nurses	59.1

earlier than those in the private sector. According to BLS, two-thirds of all State and local employees in 1994 were covered by pension plans that allow a person to retire at age 55 or earlier, as long as they have met a years-of-service requirement (usually 30 years).[11] This standard also applies to Federal employees. It is also the case that most government employees are covered under defined benefit pension plans that provide the maximum economic benefits to those who retire at the earliest possible age of pension eligibility. People under these plans tend to retire earlier than those under other plans or with no pension coverage.[12] For these reasons, government occupations will be among the first to experience the effects of the surge in retirements by baby-boomers.

In contrast, table 3 lists the occupations that will have the most replacement needs due to persons aged 45 and older leaving the occupation as a percentage of the occupation's workforce that was 45 and older in 1998. What makes these occupations unique is not the percentage of persons 45 and older leaving them; rather, these occupations already have a workforce that is older than average. It is this combination of older-than-average workforces and greater-than-average percentage of people aged 45 and older leaving that makes these occupations stand out, because even in occupations with workforces younger than average, those aged 45 and older typically leave in large numbers. On average, 54 percent of workers aged 45 and older will leave the workforce in the next 10 years. Interestingly, secondary school teachers is the only occupation to appear in tables 1 and 2, having both a large number of people leaving the labor force and a very large percentage of those aged 45 and older leaving the profession.

Table 4 shows the top 20 occupations most affected by baby-boomer retirement. It is assumed that the effect will be stronger in the later years when the baby-boomers are older. By looking at the replacement-needs data over a 15-year period, using 5-year cohort data, if an occupation is projected to have much greater replacement needs in the 2003–08 period than in the 1993–98 period, it was assumed to be attributable mostly to the baby-boomers retiring. Under this assumption, most job openings or replacement needs occurring during the 1993–98 period were attributable mostly to non-baby-boomers. By 2008, however, the oldest baby-boomers will be age 62—at or near the average retirement age for the population—and thus the 2003–08 period will include baby-boomers aged 45 to 62. On average, for all employees, replacement needs during the 2003–08 period are projected to be about 25 percent greater than during the 1993–98 period, confirming the significant impact of baby-boomer retirements. The occupations listed in the table employ a large number of baby-boomers, and early retirements are prevalent. Airline pilots fall into this category, as well as most public administration and teaching occupations.

Table 5 lists all the occupations in this study ranked by percentage of workers aged 45 years and older, along with total replacement needs for the occupation and an estimate of the percentage of workers aged 45 and older that will leave by 2008. It also shows the industries that employ approxi-

Table 4. Occupations most affected by baby-boomer retirements, 1993–2008

[Numbers in thousands]

Occupation	Retiree replacement needs, 1993–98[1]	Retiree replacement needs, 1998–2003[1]	Retiree replacement needs, 2003–08[1]	Percent change, 1993–98 to 2003–08[2]
Total, all employees	9,419	10,411	11,794	25.2
Airline pilots and navigators	5	9	14	172.7
Management analysts	6	11	16	152.0
Teachers, special education	8	11	19	135.4
Photographers	3	4	5	94.8
Teachers aides	27	38	52	91.8
Industrial engineers	11	15	21	87.6
Eligibility clerks, social welfare	5	6	9	85.0
Personnel and labor relations managers	7	9	13	83.6
Postal clerks, except mail carriers	16	20	30	81.0
Supervisors, police and detectives	9	14	17	80.2
Plumbers, pipefitters, and steamfitters	21	28	36	73.6
Financial managers	34	44	58	73.1
Psychologists	15	17	26	73.0
Social workers	32	40	54	72.0
Lawyers	33	42	57	71.6
Administrators, education and related fields	59	78	101	70.6
Teachers, elementary school	141	181	237	68.8
Registered nurses	116	143	188	62.6
Administrators and officials, public admin.	50	62	81	60.3
Chemists	7	7	11	57.6

[1] Numbers based on 5-year average, not equivalent to total employed.

[2] Calculated percentage uses unrounded numbers.

Table 5. Occupations with a greater-than-average number of workers aged 45 years and older, 1998–2008

[Numbers in thousands]

Occupation	Total employed, 1998	Percent employed, 45 and older, 1998	Retiree replacement needs, 1998–2008	Percent workers 45 and older leaving occupation, 1998–2008	Industries employing more than 20 percent of occupation
Total, all employees	131,995	34	22,205	53.8	
Farmers, except horticultural	946	69	175	24.3	Agriculture
Construction inspectors	71	61	17	45.9	Construction; public administration
Real estate sales occupations	753	60	144	33.8	Real estate
Administrators and officials, public administration	632	59	143	41.7	Public administration
Clergy	327	57	69	36.6	Religious organizations
Millwrights	83	57	22	53.3	Manufacturing
Librarians	209	57	50	46.4	Libraries; education
Administrators, education and related fields	754	56	178	47.1	Education
Bus drivers	474	54	89	34.9	Bus service and urban transit; education
Dressmakers	68	53	14	28.4	Dressmaking shops; retail trade
Dentists	156	51	29	40.3	Offices of dentists
Stationary engineers	130	51	27	47.7	Manufacturing; real estate
Teachers, secondary school	1,228	50	378	66.8	Education
Counselors, educational and vocational	231	50	56	48.4	Education
Managers, properties and real estate	521	50	70	26.3	Real estate
Psychologists	233	49	43	36.9	Health services, not elsewhere classified (n.e.c); offices of health practitioners, n.e.c.
Crane and tower operators	67	49	16	54.2	Metal industries mfg.; construction; blast furnaces
Management analysts	443	49	28	15.7	Management and public relations
Telephone installers and repairers	232	49	60	69.6	Telephone communications
Authors	130	49	17	29.5	Miscellaneous professional services
Private household workers	555	48	112	45.8	Private households
Inspectors and compliance officers, excluding construction	238	48	42	39.4	Public administration
Rail transportation occupations	105	47	33	60.6	Railroads
Tool and die makers	135	47	24	42.4	Manufacturing
Taxi cab drivers and chauffeurs	275	47	39	38.9	Taxicab service; bus and urban transit
Upholsterers	71	47	12	53.1	Furniture and fixtures manufacturing; miscellaneous repair services.; retail trade
Welfare service aides	92	46	24	65.1	Social services, n.e.c.
Insurance sales occupations	595	46	135	52.1	Insurance
Physicians	743	46	108	37.2	Offices of physicians; hospitals
Supervisors, cleaning and building service workers	165	46	40	52.3	Services to dwellings and other buildings; hotels and motels
Teachers, college and university	922	45	195	50.1	Education
Supervisors, police and detectives	118	45	31	70.9	Public administration
Managers, farms, except horticultural	170	45	22	32.6	Agriculture
Lawyers	955	44	99	27.7	Legal services; public administration
Mail carriers, postal service	334	44	87	65.8	Postal service
Personnel and labor relations managers	163	44	22	40.3	Manufacturing
Postal clerks, except mail carriers	320	43	50	39.1	Postal service
Bookkeepers, accounting and auditing clerks	1,735	43	330	46.4	Retail trade
Architects	158	43	19	34.7	Engineering and architectural services
Secretaries	2,925	43	519	41.9	No concentration
Airplane pilots and navigators	113	43	24	47.9	Air transportation
Teachers, elementary school	1,957	43	418	54.4	Education
Barbers	67	42	24	58.5	Barber shops
Supervisors, mechanics and repairers	259	42	69	68.3	Manufacturing; retail trade
Janitors and cleaners	2,247	42	408	47.8	Building services; education
Winding and twisting machine operators	53	42	12	55.2	Textile mill products manufacturing
Sales workers, furniture and home furnishings	153	41	27	46.3	Retail trade
Teachers aides	635	41	90	38.1	Education
Painters, sculptors, craft-artists, and printmakers	242	41	39	42.5	Miscellaneous professional services; manufacturing
Guards and police, except public service	759	40	96	34.3	Detective and protective services

Table 5. Continued—Occupations with a greater-than-average number of workers aged 45 years and older, 1998–2008

[Numbers in thousands]

Occupation	Total employed, 1998	Percent employed, 45 and older, 1998	Retiree replacement needs, 1998–2008	Percent workers 45 and older leaving occupation, 1998–2008	Industries employing more than 20 percent of occupation
Operating engineers	245	40	44	50.7	Construction
Miscellaneous electrical and electronic equipment repair	83	40	14	44.0	Motor vechicle and equipment manufacturing
Electrical and electronic equipment assemblers	343	40	58	54.7	Elec. mach., equip., and supplies manufacturing
Fishers, hunters, and trappers	53	40	10	57.2	Fishing, hunting, and trapping
Eligibility clerks, social welfare	94	39	14	34.7	Public admin.; social serv., n.e.c.; offices of physicians
Supervisors, general office	398	39	79	48.2	Public administration; banking
Personnel clerks, excluding payroll and timekeeping	74	39	13	53.4	Public administration
Production inspectors, checkers, and examiners	524	39	96	47.6	Manufacturing
Civil engineers	297	39	42	43.5	Construction; public administration
Supervisors, motor vehicle operators	88	39	14	55.7	Trucking; wholesale trade
Registered nurses	2,039	39	331	47.2	Hospitals
Grader, dozer, and scraper operators	76	38	6	19.4	Construction
Pressing machine operators	92	38	18	48.3	Laundry and garment serv.; apparel products mfg.
Supervisors, construction workers	756	38	165	65.9	Construction
Teachers, special education	382	38	29	22.6	Education
Textile sewing machine operators	514	38	81	39.2	Apparel and textile products manufacturing
Sheriffs, bailiffs, other law enforcement officers	162	38	13	25.7	Public administration
Maids and housekeeping cleaners	657	38	122	51.5	Hotels and motels; hospitals; nursing facilities
News vendors	101	38	12	30.5	Printing and publishing; retail trade
Brickmasons and stonemasons	192	38	29	56.7	Construction
Telephone operators	160	38	36	62.4	Telephone communications
Records clerks	206	37	23	37.1	Education
Dieticians	91	37	18	57.3	Hospitals; nursing facilities
Messengers	156	37	17	33.0	Trucking services
Musicians and composers	183	37	25	42.4	Entertainment and rec. services; religious organizations
Technical writers	73	37	12	59.0	Manufacturing; computer and data processing services
Industrial engineers	262	37	36	38.8	Manufacturing
Library clerks	174	37	22	39.4	Libraries; education
Operations and systems researchers and analysts	212	37	54	74.2	Manufacturing; public administration
Plumbers, pipefitters, and steamfitters	516	37	65	38.1	Construction
Industrial machinery repairers	563	37	125	60.4	Manufacturing
Water transportation occupations	63	37	16	76.7	Water transportation
Interviewers	167	37	22	43.9	Hospitals; research and development
Payroll and timekeeping clerks	147	36	31	54.2	No concentration
Surveying and mapping technicians	72	36	8	34.5	Engineering and architectural services
Truck drivers	3,023	36	425	43.1	Trucking; retail trade
Office machine repairers	62	36	9	46.3	Wholesale trade; electrical repair shops
Dental laboratory and medical appliance technicians	54	35	11	64.7	Health services n.e.c.; offices of dentists
Chemists, excluding biochemists	134	35	18	38.7	Chem. and allied prod. mfg. research and development
Financial managers	707	35	102	51.6	Banking
Underwriters	117	35	19	68.6	Insurance
Aerospace engineers	86	35	13	43.0	Guided missiles, space vehicles mfg.; aircraft and parts manufacturing
Machinists	532	35	89	53.8	Mach. and computer equip. mfg.; metal industries mfg.
Sales workers, motor vehicles	310	35	41	37.5	Retail trade
Photographers	155	35	9	20.4	Miscellaneous personal services
Public relations specialists	170	35	28	56.8	Management and public relations
Mail clerks, except postal	179	35	20	35.5	No concentration
Licensed practical nurses	382	35	85	59.1	Hospitals; nursing facilities
Laundering and dry cleaning machine operators	200	35	44	67.7	Laundry, cleaning, and garment services
Social workers	751	34	95	39.1	Social services n.e.c.; public administration
Production coordinators	256	34	37	51.8	Manufacturing
Dispatchers	235	34	39	55.4	Public administration; trucking

mately 20 percent or more of the occupation. It can be assumed that these industries will be at least moderately affected by the aging of workers in the occupation. How severe the impact will be largely depends on how critical the occupation is to the industry and whether the industry is trying to add or reduce workers in the field. Due to the large number of individual manufacturing industries, it is rare for one to employ more than 20 percent of an occupation. In most cases, therefore, only the aggregate industry manufacturing was listed. However, when a particular manufacturing industry did dominate a profession, it was listed separately.

Although much of the industry information is intuitive—such as teachers tending to work in the education industry—the table does point out industries that will be affected by retirements in multiple occupations. Although manufacturing leads the list of affected industries—with 12 occupations and another 14 manufacturing industries listed separately—it is difficult to measure the effect because of the size of the manufacturing sector and the number of occupations included within it. Several of the occupations in the manufacturing sector are managerial or highly skilled jobs, normally held by older, more experienced workers. It is the experience and skill that many manufacturing companies will miss most, because of the length of time it takes to train new workers.[13] However, the manufacturing sector includes industries in decline as well as industries that are growing; therefore, the reasons that some of the occupations have a higher concentration of older workers may vary between industries. One detailed manufacturing industry that appears three times in the table is apparel and textile mill products. As an industry widely known to be in decline and projected by BLS to have negative job growth through 2008, the lack of new hiring in this industry has created a workforce whose average age is unusually high.

The public administration industry appears 13 times in table 5, and it includes Federal, State and local government workers employed in the administrative, executive, legislative, judicial, regulatory, and international areas of government. Other industries employing a relatively large number of government workers include educational services, hospitals, and urban transit. Again, it is hard to measure the effect of retirements on this industry, because of the wide variety of jobs and differing growth trends among the three branches of government, with employment projected to decline in Federal government and to grow in State and local government. However, one occupation that makes up a large proportion of government employment will soon lose significant numbers to retirement—officials and administrators, public administration. In this occupational group, 59 percent of its workers are aged 45 and older, with 42 percent projected to leave by 2008. Clearly, upcoming retirements will dramatically affect this important government occupation.

The industry that will be most affected by baby-boomer retirements is educational services. Nearly all the major occupations that make up this industry are included in table 5, many near the top of the list. People in this industry retire earlier, in general, because of pensions that often provide full coverage for qualified employees after 30 years of service. Also, a slowdown in hiring in the 1980s and early 1990s raised the average age of the teaching professions and left fewer workers to move into vacant slots.

Almost all the transportation industries are on the list, including railroads, bus service, urban transit, taxicab service, air transportation, trucking, and water transportation. The reasons for this include the relatively high age requirements for operating vehicles and other modes of transportation, high wages and low turnover rates in the highly unionized railroad and airline industries, and a large number of part-time workers, especially in bus and taxicab services, occupations often preferred by older workers.

The health services industry (especially hospitals) and the construction industry are two other sectors that have at least eight occupations listed in table 5. In particular, registered nurses (RNs) and licensed practical nurses (LPNs) are expected to leave the hospital industry in large numbers. Currently, 62 percent of RNs and 32 percent of LPNs work in hospitals. A number of other healthcare occupations are on the list, including physicians, dentists, and psychologists. Construction industry occupations listed in the table tend to be senior or skilled positions, where one would expect to find more older workers. On the whole, though, the average age in the construction industry is much lower than average.

The data show that the impact on occupations and industries from the retirements of the oldest baby-boomers will vary, even among those occupations with a greater-than-average number of workers aged 45 years and older. The impact will be felt more prominently in some occupations (particularly those in education and public administration) than in others (such as farming, where replacement needs equal about a quarter of the workforce aged 45 and older). Among the broad occupational groups, the executive, administrative, and managerial occupations will experience the greatest turnover. Those 45 and older make up 41 percent of this group, and 42 percent of these older workers are expected to leave by 2008. That is equal to nearly 3 million job openings in this field due to retirements, resulting in a significant loss of managerial skills and experience.

For a number of occupations, however, the attrition generated by the upcoming retirements may be the preferred mechanism to reduce the size of the occupation in the face of declining demand. Farmers, bookkeepers, sewing machine operators, among others, all face declining prospects due to productivity improvements or declining U.S. production.

Beyond 2008

The effect of baby-boomer retirements will be more dramatic in the decade following 2008. By 2018, all but the youngest

baby-boomers will be of retirement age. Aggravating the situation is a much smaller pool of workers immediately following the baby-boomers. Nevertheless, there are encouraging signs that the labor force will not collapse in 20 years. Recent changes to Social Security will probably cause some to delay retirement. The increased use of defined contribution pension plans, such as 401(k)s, which do not have an age or length-of-service component, may motivate some to stay in the workforce longer. A healthier older population and one that sees work as beneficial may also keep people working longer. Finally, the supply of workers may be on the upswing. Immigration, for example, is projected to continue increasing in the coming years, and the birth rate increased over the 1979–94 period, the so-called "baby-boom echo."[14] These phenomena will help provide more workers for a dwindling labor force. □

Notes

ACKNOWLEDGMENT: The author thanks Sean Kirby of the Office of Employment Projections for programming support.

[1] Howard N Fullerton, Jr., "Labor force projections to 2008: steady growth and changing composition," *Monthly Labor Review*, November 1999, pp. 19–32; see table 5, p. 27; for age of labor force, see p. 30.

[2] Murray Gendell, "Trends in retirement age in four countries, 1965–95," *Monthly Labor Review*, August 1998, pp. 20–30; for methodology, see p. 21 and sources cited; for study results, see pp. 22–25.

[3] *Social Security Bulletin, Annual Statistical Supplement, 1999* (Social Security Administration, 1999), p. 265.

[4] Bureau of Labor Statistics, unpublished tabulations from the Current Population Survey, 1999 annual averages.

[5] Howard N Fullerton, Jr., "Labor force projections to 2008," table 3, p. 24.

[6] *Employee benefits in medium and large private establishments, 1997*, USDL 99–02 (U.S. Department of Labor), Jan. 7, 1999.

[7] "Baby Boomers Envision Their Retirement: An AARP Segmentation Analysis" (American Association of Retired Persons, February 1999), on the Internet at **http://www.aarp.org** (visited June 2000).

[8] The Current Population Survey (CPS), conducted for BLS by the Bureau of the Census, is a monthly survey of about 50,000 scientifically selected households, chosen to be representative of the civilian noninstitutional population of the United States. Each month, using CPS data, BLS analyzes and publishes statistics on the labor force, employment, and unemployment, classified by a variety of demographic, social, and economic characteristics. For more information on the CPS, see *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 4–14. All of the data cited in this paragraph are from unpublished tabulations from the Current Population Survey, 1999 annual averages.

[9] Joseph Quinn, Richard Burkhauser, Kevin Cahill and Robert Weathers, "Microeconometric Analysis of the Retirement Decision: United States," Economics Department Working Papers No. 203 (Organisation for Economic Co-operation and Development, July 1, 1998), pp. 18–19; also, see OECD's Economics Department website on the Internet at **http://www.oecd.org/eco/eco**.

[10] BLS uses age-specific employment data from the CPS for two discrete points in time to estimate net separations. The same birth cohort is followed over the course of 5 years as it enters the next older age cohort. The resulting employment change for that cohort determines if there is a net decline in the occupation or net growth for that particular age group. This is repeated for all birth cohorts. The sum of net separations across all age groups determines the number of net separations for the occupation. Permanent exits from the occupation are totaled and reported as net separations and go into the calculation of future replacement needs for each occupation after employment changes are taken into account. For more information on how separation rates and replacement-needs data are calculated, see "Estimating Occupational Replacement Needs," in *Occupational Projections and Training Data*, Bulletin 2521 (Bureau of Labor Statistics, May 2000), pp. 71–90.

[11] *BLS reports on employee benefits in State and local governments, 1994*, USDL 95–368 (U.S. Department of Labor), Sept. 14, 1995.

[12] Quinn, Burkhauser, Cahill, and Weathers, "Microeconometric Analysis of the Retirement Decision," p. 19

[13] "Ageing Workers," *The Economist*, Sept. 4, 1999, p. 65.

[14] Frederick W. Hollman, Tammany J. Mulder, and Jeffrey E. Kallan, "Population Projections of the United States, 1999 to 2100: Methodology and Assumptions," Working Paper No. 38 (U.S. Bureau of the Census, 1999).

On the decline in average weekly hours worked

The decline in the workweek in private industry as measured by the Current Employment Statistics survey can be attributed to the combination of disproportionate employment growth and low and declining hours in retail trade

Katie Kirkland

How many hours per week do workers in the United States spend at their paying jobs? The answer can be found by examining two principal BLS surveys used to track the number of hours that Americans work per week. The Current Population Survey (CPS) shows that there has been little change in average weekly hours worked; from 1964 to 1999, there was a decline of 0.5 percent in the average weekly hours at work in nonagricultural industries. This statistic contrasts information on the average workweek from the Current Employment Statistics (CES) program, otherwise known as the "establishment survey" or the "payroll survey." Here, data show a long-term downward trend in the average length of the workweek. From 1964 to 1999, average weekly hours fell by a substantial 11 percent, from 38.7 to 34.5 hours, based on annual averages of monthly data.

Considering that most people do not differentiate between paid and unpaid work, it becomes clearer why these two labor economics surveys from the BLS report contradictory data on the workweek. The most apparent reason is that the two surveys use different sources of information, resulting in a variation in the type of data gathered.

The CPS survey is a household survey; the CES survey is an establishment survey. The CPS hours data is based on workers' reports on the hours they actually worked and includes all jobs they held during the survey reference period.[1] The CES survey represents employers' reports on the employees' paid hours of work. If a person works for more than one employer, the hours are reported separately for each. For example, in the CES a person working two part-time jobs of 20 hours a week is counted as having two 20-hour jobs, but in the CPS , the same individual is counted as one worker working 40 hours. In May 2000, 5.7 percent of all employed persons 16 years and older were multiple jobholders. Thus, the CPS is the appropriate survey to use to examine trends in a person's average workweek, while the CES is used to examine trends in the average number of hours people spend at each job.

Further, the scope of workers covered by the two measures differs. The CPS presents data for the total civilian noninstitutional population, while the CES hours data are limited to the private sector. The CES reports hours data for production workers in the goods-producing sector and nonsupervisory workers in the service-producing sector. The data sources and scopes of the two surveys explain why they could have different trends in the length of the workweek, but why does the CES measure show declining hours?

To investigate, one must first understand how average weekly hours are calculated using CES data. For each industry, the sum of the reported paid hours worked is divided by the total number of production workers reported for that same industry.[2] Accord-

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Table 1. Average weekly hours and employment of production/nonsupervisory workers by major industry division, 1964–99

Industry	Average weekly hours				Production/nonsupervisory workers			
	1964	1999	Change		1964	1999	Change	
			Level	Percent			Level	Percent
Total private	38.7	34.5	–4.2	–10.9	40,560	88,911	48,351	119.2
Goods producing								
Mining	41.9	43.8	1.9	4.5	497	402	–95	–19.1
Construction	37.2	39.1	1.9	5.1	2,637	4,953	2,316	87.8
Manufacturing	40.7	41.7	1.0	2.5	12,781	12,739	–42	–.3
Service producing								
Transportation and public utilities	41.1	38.7	–2.4	–5.8	3,490	5,660	2,170	62.2
Wholesale trade	40.7	38.3	–2.4	–5.9	2,832	5,538	2,706	95.6
Retail trade	37.0	29.0	–8.0	–21.6	8,037	20,046	12,009	149.4
Finance, insurance, and real estate	37.3	36.2	–1.1	–2.9	2,346	5,546	3,200	136.4
Services	36.1	32.6	–3.5	–9.7	7,939	34,027	26,088	328.6

NOTE: Levels of production/nonsupervisory workers are in thousands.
SOURCE: Bureau of Labor Statistics, Current Employment Statistics program.

ingly, when either the total hours or the number of production workers change, average weekly hours are affected. Following are some situations that would cause such changes:

- When individual workers have fewer paid hours in their current jobs, total hours decrease, causing average weekly hours to decline.
- When companies begin to employ more part-time workers while holding on to their full-time workforce, the average weekly hours total falls as the number of workers increases at a faster rate than does the figure for total hours.
- When companies that employ a large percent of part-time workers (that is, companies that have short average workweeks) grow faster than otherwise comparable companies within an industry, average weekly hours decline.
- When aggregating hours across industries, the average weekly hours for each industry are weighted (or multiplied) by the proportion of production or nonsupervisory workers in the industry division. Thus, if employment in an industry with low average weekly hours grows faster than the average pace for all industries in its division, then the low-hours industry increases its share in the aggregation and the average weekly hours for all industries would decline.

While the CES survey data do not explain why the workweek in a particular company or industry is declining, an examination of which industries are responsible for the declines can shed light on the various reasons why the average workweek for the private sector has declined over the past 35 years.

Shifts among industry divisions

Which major industry divisions caused the sharp downward trend in the private sector workweek from 1964 to 1999? During this period, all the goods-producing divisions—mining, construction, and manufacturing—added hours to their workweeks. In contrast, the service-producing divisions—transportation and public utilities, wholesale trade, retail trade, finance, insurance, and real estate, and services—all lost hours in their workweeks. (See table 1.)

The two major divisions with the highest number of hours in 1999—mining and manufacturing—saw a decrease in the percentage of production workers. The loss of production workers in these two divisions caused a reduction in their shares of private sector production workers. This phenomenon negatively affected the level of average weekly hours in private industry, because the goods-producing industries that had higher average weekly hours carried less weight in the private sector average. Also, the two industry divisions in the service-producing sector with the lowest average weekly hours, retail trade and services, experienced the largest percent increases in nonsupervisory workers. The number of nonsupervisory workers increased by 149 percent in retail trade. In services, the figure was even more dramatic, increasing by 329 percent. With their large and increasing shares of private sector employment and their low and declining average weekly hours, retail trade and services

were the two industry divisions most responsible for the decline in average weekly hours in private industry.

Retail trade experienced the most significant loss in average weekly hours—21.6 percent. Services was second with a nearly 10-percent decline. The level of average weekly hours in services was just below the level in private industry. (See chart 1.) A further investigation of retail trade and services explains most of the long-term decline of average weekly hours in the total private sector.

Declining workweek in retail trade

All of the industries within retail trade exhibited declining average weekly hours from 1972 to 1999. (See table 2.) Total retail trade and most of its industries had declining average weekly hours from 1972 to 1991, followed by small gains in hours over the 1992 to 1999 period. (See chart 2.) Overall, from 1972 to 1999, average weekly hours in retail trade fell by about 13 percent.

The repeals of the Blue Laws may have had a substantial impact on weekly hours in retail trade. The Blue Laws, statutes that regulated personal and public conduct, originated in Virginia in 1624. During the late 20th century, repeated legal challenges to the constitutionality of the Blue Laws were made in courts, particularly regarding the Sunday closing of retail and other business establishments.[3] In 1961, all 50 States had Sunday closing laws, but by 1991, only 13 States still upheld Blue Laws.[4] To keep stores open on Sundays, establishments would have been likely to hire more part-time employees, leading to a shortening of the workweek because the level of total hours would not increase as quickly as the number of workers. Therefore, the repeals of the Blue Laws could help explain the decline in average weekly hours throughout retail industries, including apparel, furniture, and miscellaneous retail stores (such as toy, jewelry, and gift stores).

Just as the repeals of the Blue Laws likely led to the addition of part-time jobs to cover Sundays, average weekly hours also would have been affected by the steady proliferation throughout the United States of shopping malls, with their numerous stores remaining open longer hours throughout the week than had been the case in earlier years. These longer hours of operation created the need for more part-time workers to staff the extra hours. This, in turn, increased the numbers of nonsupervisory workers with short hours, which lowered the average hours in a workweek.

From 1972 to 1999, eating and drinking places had the largest percent increase in production workers and the most significant percent decrease in average weekly hours among retail trade industries. Because of eating and drinking places' increased share in retail trade employment, the lower-than-average level of average weekly hours in the industry also contributed to a decline in the level of retail trade's average weekly hours. Most significant was the compounding effect in eating and drinking places. This industry experienced both the largest decrease in average weekly hours and the largest increase in nonsupervisory workers, even while maintaining a very low level of average weekly hours.

The sharpest declines in average weekly hours were in eating and drinking places during the 1970s. (See chart 2.) During this period, the gains experienced by eating and drinking places were caused, in part, by the growth of dual-earner families. This created a higher demand and supplied the means to pay for meals away from home.[5] Eating and drinking establishments have met their employment needs by hiring various types of employees: students needing flexible work schedules, workers seeking secondary part-time jobs, and retired persons desiring supplemental income.[6] The hiring of large amounts of part-time employees drove down the level of average weekly hours in eating and drinking places, and with its increased share of employment in retail trade, it also drove down the division's average weekly hours.

Table 2. Average weekly hours and employment of nonsupervisory workers in retail industries, 1972–99

Industry	Average weekly hours				Nonsupervisory workers			
	1972[1]	1999	Change		1972[1]	1999	Change	
			Level	Percent			Level	Percent
Retail trade	33.4	29.0	–4.4	–13.2	10,717	20,046	9,329	87.0
Building materials	38.9	35.2	–3.7	–9.5	442	826	384	86.9
General merchandise	31.7	29.6	–2.1	–6.6	1,982	2,589	607	30.6
Food stores	32.8	29.9	–2.9	–8.8	1,676	3,161	1,485	88.6
Automotive dealers	39.8	35.5	–4.3	–10.8	1,497	1,969	472	31.5
Apparel	31.0	26.3	–4.7	–15.2	693	985	292	42.1
Furniture	37.0	33.0	–4.0	–10.8	439	894	455	103.6
Eating and drinking	30.4	25.6	–4.8	–15.8	2,674	7,131	4,457	166.7
Miscellaneous retail	34.0	29.6	–4.4	–12.9	1,316	2,491	1,175	89.3

[1]The earliest date of data available for some of the detailed industry series is 1972.
NOTE: Levels of nonsupervisory workers are in thousands.

Chart 1. Average weekly hours for the total private sector and selected industry divisions, 1964–99

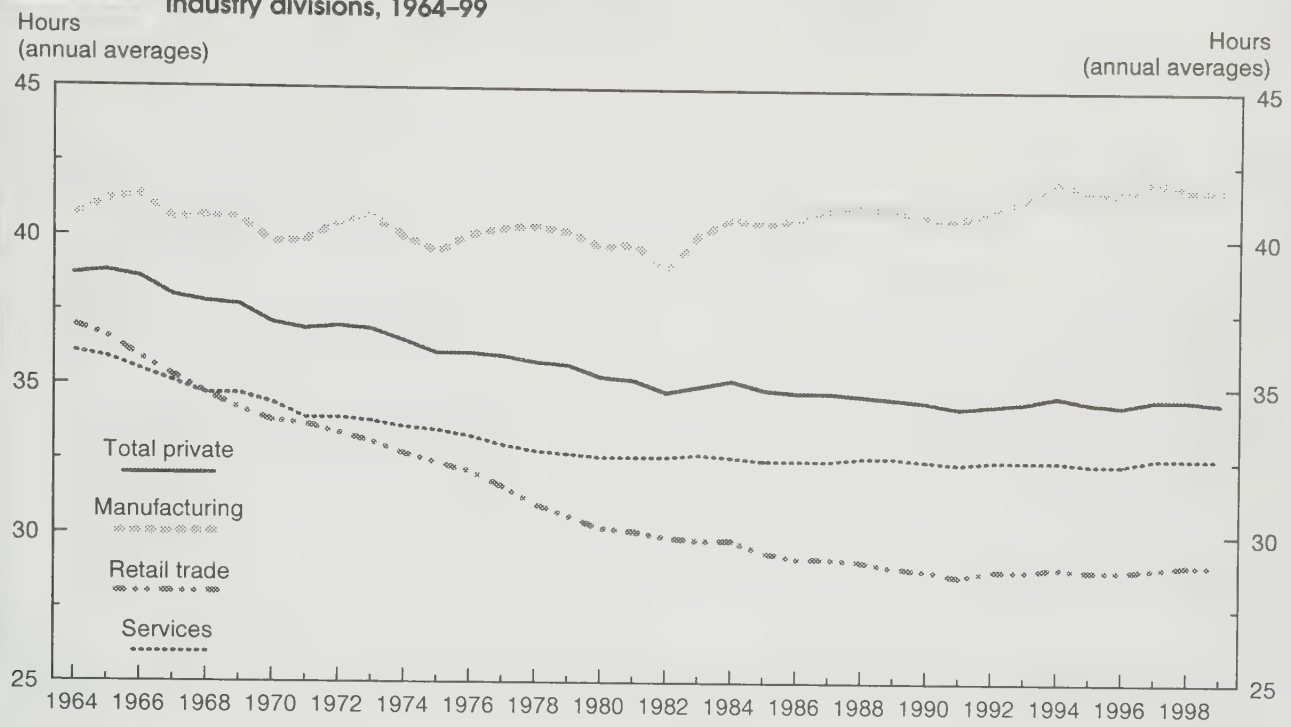

Chart 2. Average weekly hours of selected retail industries, 1972–99

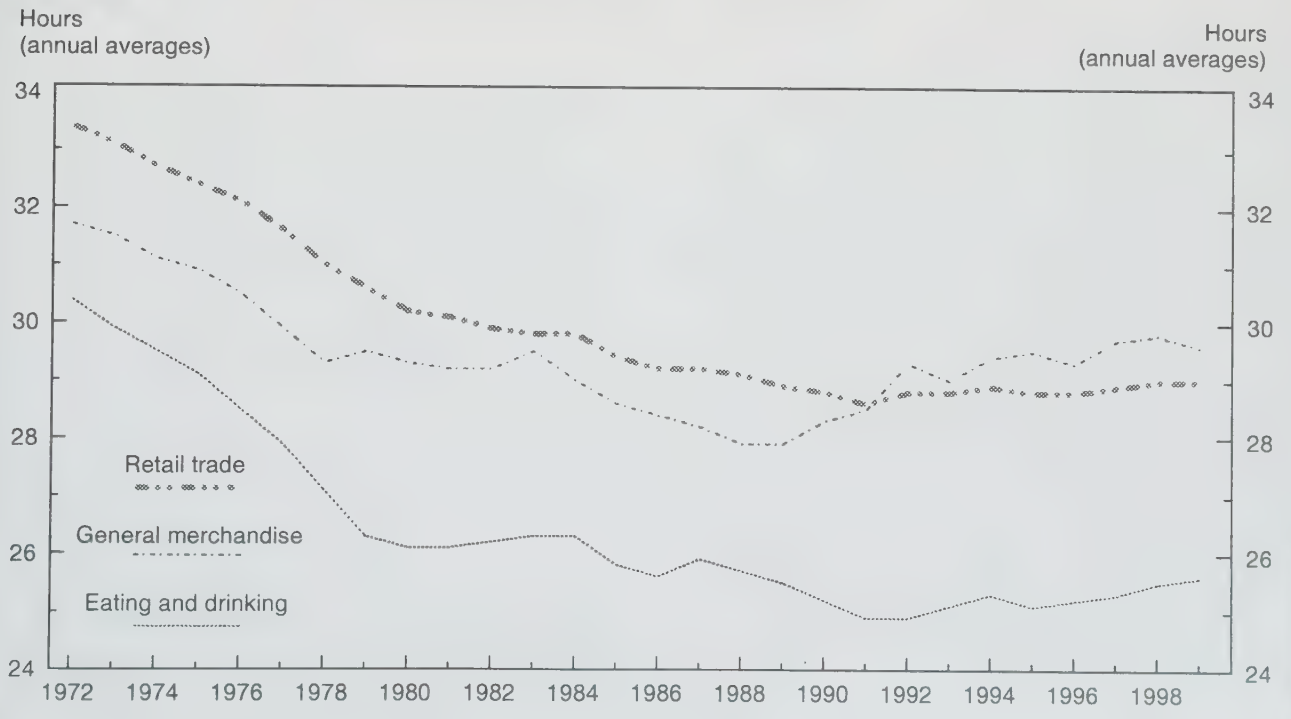

Table 3. Average weekly hours and employment of nonsupervisory workers in selected service industries, 1972–99

Industry	Average weekly hours				Nonsupervisory workers			
	1972	1999	Change		1972	1999	Change	
			Level	Percent			Level	Percent
Services	33.9	32.6	–1.3	–3.8	11,059	34,027	22,968	207.7
Agricultural services	[1]35.7	34.8	–.9	–2.5	236	648	412	174.6
Hotels and motels	33.1	30.9	–2.2	–6.6	718	1,569	851	118.5
Business services	[2]33.3	33.7	.4	1.2	[3]2,361	8,200	5,839	247.3
Auto repair, services, and parking	37.5	35.6	–1.9	–5.1	349	963	614	175.9
Miscellaneous repair services	40.6	37.9	–2.7	–6.7	172	309	137	79.7
Motion pictures	[4]28.0	30.9	2.9	10.4	[4]287	515	228	79.4
Amusement and recreation services	[4]27.2	26.5	–.7	–2.6	[4]862	1,450	588	68.2
Health services	33.7	32.9	–.8	–2.4	3,083	8,845	5,762	186.9
Legal services	34.4	34.9	.5	1.5	245	796	551	224.9
Social services	32.7	31.2	–1.5	–4.6	467	2,422	1,955	418.6
Engineering and management	[4]37.4	37.3	–.1	–.3	[4]1,728	2,444	716	41.4
Services, not elsewhere classified	[4]36.1	35.3	–.8	–2.2	[4]25	41	16	64.0

[1]Start date is 1982.
[2]Start date is 1988.
[3]Start date is 1981.
[4]Start date is 1988.

NOTE: Levels of nonsupervisory workers are in thousands.

Job growth in services

Like retail trade, the services industry division also had weekly hours that declined over the 1964–99 period. However the rapid employment growth in services was the more important contribution of this industry division to the decline in the private sector's weekly hours. Over the period, the services industry, where average weekly hours are shorter than the private sector average, experienced a 329-percent increase in the number of nonsupervisory workers. With its increased share of private sector employment, the below-average figure for average weekly hours in services pulled down the private sector average. Business services and health services account for about half of the growth among nonsupervisory service industry workers, and the workweeks in these two industries were shorter than the average for all industries. (See table 3.)

Within business services, help supply services (which is dominated by temporary help agencies) showed the largest increase—2.5 million nonsupervisory workers from 1972 to 1999. Help supply services also had a shorter workweek than the average for all services industries. Some companies use such help supply firms to supplement their workforce when product demand increases. This competitive strategy of using "just-in-time labor" enables companies to increase flexibility and decrease organizational costs.[7]

Average weekly hours not only were lower in services than in all private industries, but were declining as well. The downward pressure on average weekly hours for the services division was widespread, as three-fourths of the services industries showed declines in their workweeks. The increase of workers in personnel supply also helps to explain the decline in services average weekly hours, because even though average weekly hours for help supply are increasing, they are lower than the overall services average.

THE DECLINE IN THE LENGTH of the total private workweek over the last 35 years was caused primarily by the combined effects of disproportionate employment growth and low and declining average weekly hours in retail trade and services. In fact, among the eight private sector industry divisions, retail trade and services had: 1) the shortest workweeks in 1964, 2) the largest declines in average weekly hours measured in either hours or percentages between 1964 and 1999, and 3) the highest employment gains over the period on either a level or percent basis. Within retail trade, average weekly hours were particularly low and on the decline in eating and drinking places, which experienced strong employment growth. Within services, strong employment growth in the help supply industry, which has a shorter-than-average workweek, also contributed to the decline in average weekly hours in the private sector, in spite of its increasing average hours. In addition, employment declines in mining and manufacturing, which have high average weekly hours, had a negative impact on average weekly hours in the private sector because of their decreased shares in private sector employment. □

Notes

[1] The CPS provides data on several different concepts of hours worked. Each month, all survey respondents are asked about the total hours worked at all jobs during the survey reference week; a quarter of the sample respondents each month are asked about the usual hours worked per week on the primary job; and, each year in a supplement to the CPS conducted in March, all survey respondents are asked about the usual hours worked per week during the last year. For further information, see "Hours of Work," *Report on the American Workforce* (Bureau of Labor Statistics, 1999), Chapter 3.

[2] For a more detailed explanation of methods for computing industry statistics on hours, please refer to the "Establishment Data" section (particularly Table 2-A) of the "Explanatory Notes and Estimates of Error," in *Employment and Earnings*, a monthly publications of the Bureau of Labor Statistics.

[3] See "Blue Laws," *Microsoft Encarta Online Encyclopedia 2000*, on the Internet at **http://encarta.msn.com** (visited Aug. 30, 1999).

[4] See Steven Lagerfeld, "Spending Time," *Current*, February 1, 1999 (UMI Publications, Heldref Publications), on the Internet at **http://www.westlaw.com** (visited Sept. 10, 1999).

[5] According to the Current Population Survey, from 1960 to 1999, the proportion of traditional families (the husband only in the labor force, not the wife) decreased by 69.2 percent, and the proportion of dual-worker families (both husband and wife in the labor force) increased by 71.8 percent.

[6] In 1999, 22.8 percent of employed persons aged 16 to 19 years worked in eating and drinking places; 10.5 percent of nonagricultural wage and salary multiple job holders were employed in eating and drinking places in their secondary job. In 1999, 57.7 percent of persons aged 55-64 years were employed; 12.8 percent of these employed persons worked in retail trade. Of them, 17.7 percent were employed by eating and drinking establishments. The above data are from the Current Population Survey.

[7] "'Just-in-Time' Inventories and Labor: A Study of Two Industries, 1990-98," *Report on the American Workforce* (Bureau of Labor Statistics, 1999), Chapter 1.

Shiskin Award winner

Dr. Edwin R. Dean of the U.S. Bureau of Labor Statistics has been awarded the 2000 Julius Shiskin Award for his important contributions to the improvement and understanding of productivity measures and for his leadership in international comparisons of labor statistics. Dr. Dean's expertise and innovations also have expanded the Bureau of Labor Statistics international technical cooperation program, thereby fostering the reputation of the United States as a leader in the world's increasingly global economy. The award, established by the family of the late Dr. Shiskin and administered by the Washington Statistical Society and the National Association of Business Economists, honors original and important contributions to the development and interpretation of economic statistics.

Firms, plants, and jobs

The bulk of employer-based studies of jobs and job flows are based on data collected for individual physical locations or "establishments" (sometimes called "plants"). Scott Schuh and Robert K. Triest, writing in *New England Economic Review*, add another perspective, that of the firm. A firm is an entity that may control many establishments, although roughly four out of five manufacturing firms are single-establishment firms. The other fifth, according to the tabulations the authors have constructed from the Census Bureau Longitudinal Database, account for roughly three-quarters of manufacturing employment. Thus, labor allocations made among the establishments of multiplant firms may have significant consequences and have very different causes than allocations between firms.

For example, a multiestablishment firm may transfer workers among its plant in an effort to reduce total production costs or shift the composition of output. In contrast, reallocation between firms is more likely to be due to changes in product demand. In the intra-firm case, workers may be transferred without an intervening spell of unemployment. In reallocations across firms, workers let go by firms that reduce headcounts usually undergo some period of unemployment.

Schuh and Triest examined flows of jobs for both single- and multi-establishment manufacturing firms from 1967 to 1992 and discovered the following:

- Job flows, net and gross, are much higher at single plant firms than at multiplant firms.
- Job flows *between* multiplant firms constitute less than 60 percent of the total job flows *among* the establishments of those firms.
- The share of job flows between firms declines as the number of plants owned by a firm increases.
- Excess reallocation, jobs created or destroyed in excess of what is needed to achieve the observed change in a sector's employment, is remarkably small among large firms.

Schuh and Triest conclude their paper by confirming that the labor market is in constant flux. Among smaller firms, this flux is characterized by very high rates of job creation and destruction, and is more often due to plant startups and shutdowns. Larger firms have lower rates of job creation and destruction.

'Net job growth

The Internet Economy directly supported about 2.5 million workers in 1999, according to a study by the University of Texas at Austin's Center for Research in Electronic Commerce. This represented an increase of about 650,000 jobs compared with 1998—a hefty 36-percent growth. There are now more workers employed by Internet Economy companies than by the Federal Government (excluding postal workers).

Internet Economy companies include "bricks and mortar" firms—such as decades-old retailers—that use the Internet to increase traditional sales as well as firms for whom the Internet is their primary business—such as Internet service providers. Also, some Internet Economy jobs are newly created positions arising from the growth of the Internet itself, while others are created because firms have shifted workers to take advantage of expanded Internet-related opportunities.

Revenues also soared for Internet Economy companies in 1999. The University of Texas study found that revenue was up 62 percent in 1999, to a level of $523.9 billion. The study estimated that the 2000 level would reach $850 billion if current conditions continue.

The study of the Internet Economy appeared, of course, on the World Wide Web. It was accessed at **http://www.internetindicators.com** on July 5, 2000.

Indexing the 'Net Economy

Measuring the new economy on an annual basis may not be quick enough to capture all the action. To keep closer track, *The Industry Standard,* a San Francisco-based newsmagazine covering the Internet, tabulates a broad set of Net business momentum indicators every week. The Internet Economy Index is a composite of these Internet business health indicators. The indicators include stock prices of 20 prominent Net companies, the latest week's tallies of Net IPOs and other deals, total traffic, network performance, online advertising spending, public relations or "buzz," and consumer e-commerce totals. Based on movement of these indicators and qualitative input from the *Industry Standard*'s editorial staff, each week is rated on a scale of 1 to 10 (1 is slowest and 10 is fastest) representing the momentum of the Internet Economy. For the week ended June 23, *Industry Standard* analyst Mark Mowery reported, "A downturn in online ad spending and Net traffic levels contributed to another mediocre week in the Internet economy," as the Internet Economy Index remained level at 5. □

We are interested in your feedback on this column. Write to: Executive Editor, *Monthly Labor Review,* Bureau of Labor Statistics, Washington, DC 20212, or e-mail MLR@bls.gov

Incomes of Americans

The New Dollars and Dreams: American Incomes and Economic Change. By Frank Levy. New York, Russell Sage Foundation, 1998, 248 pp. $16.95, paperback; $39.95, hardcover.

In the first quarter century after World War II—from 1946 to 1973—the economy grew rapidly and achieved most of the Nation's economic goals. In the quarter century since 1973, the American economy's performance has been much weaker. Average wage growth slowed sharply after the early 1970s. As a consequence, many of today's older workers have not seen significant income gains over their careers, contends Frank Levy in this book which updates his 1987 "Dollars and Dreams," that concentrated on the post-1973 slowdown in productivity and income growth.

But the economy may be entering a period in which it can once again generate broadly rising incomes, says the author. Whether or not this happens depends upon three factors:

1. The growth rate of labor productivity: the increase in output per hour of work.
2. The economy's level of skill bias, the degree to which new production processes, including expanding trade, favor better educated workers over less educated workers.
3. The quality of the Nation's equalizing institutions; public and private education, the welfare programs, unions, international trade regulations, and the other political structures that blunt the most extreme market outcomes and try to ensure that most people benefit from economic growth.

Contrasts and parallels are made. Sixty percent of white male workers were over age 35 in 1947, and among white men age 65, one-half still worked, compared with about one-sixth today. While the men were experienced, they did not have much formal education. Two-thirds had not finished high school, while only one-eighth had some college. In 1947, the average income gap between 30-year-old and 40-year-old white men was 7 percent. By the late 1960s, when white men were better educated, the gap was 13 percent.

Only one-third of black men, compared with three-quarters of white men, had gone beyond the seventh grade. Blacks' weak position was enforced by both legal and informal discrimination. But the demands of war production opened up manufacturing jobs to blacks, and encouraged migration out of the South, largely to Northern and Midwestern cities. Black migration was also forced by the mechanization of Southern agriculture, which eliminated farm labor jobs.

During World War II, women's labor force participation—the proportion of women older than 14 years who were working or looking for work—peaked at 35 percent in 1944, in contrast to today's 58 percent. At the war's end, it declined only modestly to 31 percent in the early postwar years.

The full employment of the Kennedy-Johnson years drew more people into the labor force, and so distributed growing incomes more equally, and the average family's real income grew by 30 percent. In both 1968 and 1969, the black male unemployment rate stood at 3.8 percent, 6 percent below its 1955 and 1965 average and about 4.5 percent below the 1997 level. Low black unemployment was strong medicine for black incomes. The proportion of black families headed by women had risen from 15 percent in 1950 to 22 percent in 1960 and 31 percent in 1969. By itself, the trend should have caused the black-white income gap to grow, but the improved economy was so powerful the ratio of black-to-white median family incomes increased from 52 to 61.

In the early 1970s, the collapse of productivity growth was a sign that U.S. firms had to organize work in new ways. But four factors undercut what should have been competitive pressure to restructure: (1) Since the late 1940s, better transportation and communication had laid the groundwork for a more competitive economy. Competitive forces were held in check by government regulations. Regulation limited a new firm's ability to enter the industry, and an existing firm's ability to change prices, both of which reduced possibilities for competition. (2) Between 1973 and 1979 prices at both the wholesale and retail levels rose more than 100 percent. (3) The value of the dollar was declining abroad. (4) Finally, labor force demographics provided a buffer of a different kind. Its numbers, amplified by the baby-boom cohorts and older married women, saw to it that the labor force grew at a very rapid 30 percent per decade.

In the 1980 presidential campaign, Ronald Reagan argued that the role of government should be limited. People and business should be given strong incentives to produce more. At the same time, Reagan proposed a series of supply side tax cuts. Today, the combination of Reagan tax cuts and no corresponding budget cuts, a policy popular at the time, is blamed for the large Federal budget deficit that extended into the 1990s.

By the late 1980s, most people knew wages were growing steadily, but growing job instability, particularly among white-collar workers, was something new. In contrast to the blue-collar recession of 1980–82, the layoffs of 1989 was a white-collar recession. Layoffs and the threats of layoffs made people cautious about pushing for wage increases.

For two decades, the most durable economic change has been the Nation's shift to a service economy, Levy says. Service firms were often labor intensive, so wage costs were important. Production was often spread over many locations, and so unionization and wage bargaining were harder. While many manufacturing jobs required physical strength, sales and clerical jobs required "soft skills" that women were supposed to have and less educated men were supposed to lack, putting the

men at a disadvantage.

Levy identifies four trends in his book:

1. The post-1973 slowdown in wage growth.
2. The post-1979 surge in skill bias that lowered demand for high school graduates and high school dropouts.
3. The long-term employment shift away from agriculture and goods production and toward the service sector.
4. An increasingly competitive environment and a shift in power away from employees and toward a firm's stockholders.

By 1996, 49 percent of white male workers were in white-collar jobs, up from 32 percent in 1950. In a related trend, white men increasingly acquired a college education. By 1950, 30-year-old white men with 4 or more years of college earned an average of 27 percent per year more than 30-year-old men with high school diplomas. This pattern continued throughout the decade. Among whites in their late 20s, the proportion with 4 or more years of college rose from 6 percent in 1947 to 12 percent in 1959. Demand grew as well, however, and the gap between college and high school earnings of 1960 was 30 percent, slightly higher than in 1950.

Beyond the educational earnings gap, a second source of earnings inequality was the growing gap among men and women with the same race, age, education, and so forth. Then in the 1970s and 1980s, many young college graduates confronted slow career starts. Slow starts reflected the softness of demand, enabling employers to enforce apprenticeship terms in journalism and other overcrowded occupations.

Levy points out that most discussions of earned income focus on inequality in the broad middle of the earnings distribution. But the growing share of all income at the very top of the distribution is increasingly attracting media attention. U.S. Census Bureau data provide little guidance here. To preserve confidentiality and elicit the public's cooperation, the Census Bureau imposes upper limits on the income data it records, and even stricter limits on the income data it releases for research analysis. To examine high incomes, the best data comes from the U.S. Treasury Department's "Statistics of Income" which annually reports adjusted gross incomes from a sample of tax returns. Treasury maintains confidentiality by recording no information about the tax filers' personal characteristics—where they live, their gender, age or education. Each observation does include the tax return's adjusted gross income and the source of that income—wages and salaries, interest and dividends, capital gains, and so on. In 1994, the top 5 percent totaled 558,000 tax filers (out of 116 million) with annual incomes of at least $282,000 in 1994 dollars, equivalent to $302,000 in 1997 dollars. Average income of these high income taxpayers was $718,000, and about 69,000 tax filing units — one return out of every 1,700 — had 1994 adjusted gross income of more than $1 million.

However, it should be noted that Internal Revenue Service numbers are for taxable income, very different from the standard definition of income, and, of course, much broader than earnings, particularly when it concerns taxpayers with high incomes. Too, Internal Revenue Service numbers would include income for both husband and wife for virtually all married couple families (which would be a large portion of the high income filers). So Treasury's data is difficult to use in connection with Census Bureau and BLS data.

After the mid-1970s, and particularly in the 1980s, economics and demography worked together, but this time to increase inequality. We have seen that earnings inequality grew as a consequence of both increasing educational requirements and the growing number of very high earners. Living arrangements reinforced these trends, both through the growth of female-headed families and increased work among wives of high-income husbands. Two other trends in this period, however, moderated the trend in inequality: the growing number of middle-income singles and rising incomes among elderly families. Without these two trends, both family and household income inequality would be even larger than they are now.

Since 1993, as the historic U.S. expansion gathered steam, real income has risen for families at the bottom of the income scale as well as for those at the top—in sharp contrast to the previous 20 years—the President's Council of Economic Advisers (CEA) reported in February of this year. The CEA report was published after Levy had completed his research, and its data is therefore not included in *The New Dollars and Dreams*. In its annual economic report, the CEA contends that from 1993 through 1998, the latest year for which figures are available, real incomes for the lowest 20 percent of families rose an average of 2.7 percent a year—compared with a 0.8-percent annual decline for the previous 20 years. Real incomes for this group actually have been going up faster than for those in the top 20 percent, who averaged a 2.4-percent gain. Of course, in dollar terms, the increases were much larger at the top. So far, the more even nature of the income gains has done little to reduce the gap between the top and bottom groups. CEA figures show, for example, that in 1973, the average income for the top 20 percent of families was 7.5 percent higher than the average income for those in the bottom 20 percent. By 1993, that had widened to 11.4 times higher, and it is close to that today.

Levy's book does include a thoughtful explanation of the history of Federal economic policies, and includes insights that may be applied to public policy today. The technological explosion, coupled with the increased educational levels of the American workers, is undoubtedly a significant factor in any analysis of the disparity between high and low incomes, as well are international events and social and foreign policy decisions of every kind.

—Mary Ellen Ayres

Office of Publications
Bureau of Labor Statistics

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This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 39, and 43. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2000 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2000 *Review* and reflect the experience through March 2000. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 45 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://stats.bls.gov/cpshome.htm

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://stats.bls.gov/ceshome.htm

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://stats.bls.gov/iprhome.htm

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2.

Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–20)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 50,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Data beginning in 2000 are not strictly comparable with data for 1999 and earlier years because of the introduction of revised population controls. Additional information appears in the February 2000 issue of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual*. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total em-

ployment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 1999 benchmarks, was made with the release of May 2000 data, published in the July 2000 issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 1999 forward and seasonally adjusted data from January 1996 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2000 data, all estimates for the wholesale trade division from April 1998 forward were revised to incorporate a new sample design. This represented the first major industry division to convert to a probability-based sample under a 4-year phase-in plan for the establishment survey sample redesign project. For additional information, see the the June 2000 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2000 data.

Beginning in June 1996, the BLS uses the X-12 ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review*). When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Compensation and Wage Data

(Tables 1–3; 21–27)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among indus-

tries or occupations with different levels of wages and compensation. For the bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://stats.bls.gov/ecthome.htm

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet:

http://stats.bls.gov/ebshome.htm

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:

http://stats.bls.gov/cbahome.htm

Price Data

(Tables 2; 28–38)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 29. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S.

border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1990.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

For the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 39–42)

Business sector and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, non-energy materials, and purchased business services.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 39–42 describe the relation-

ship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics, the Departments of Commerce, Interior, and Agriculture, the Federal Reserve Board, regulatory agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some transportation industries, only indexes of output per employee are prepared. For some trade and service industries, indexes of output per hour of all persons (including self-employed) are constructed.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 43–45)

Labor force and unemployment

Description of the series

Tables 43 and 44 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Canada, Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998), France (1992), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly comparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodol-

ogy was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 45 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 39 and 41 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy

(beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 46–47)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

http://www.bls.gov/oshhome.htm

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at:

http://www.bls.gov/oshhome.htm

Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of data on consumer and producer prices, employment and unemployment, occupational compensation, employee benefits, workplace injuries and illnesses, and productivity. The homepage can be accessed using any Web browser:

http://stats.bls.gov

Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov

In the June 2000 *Monthly Labor Review*, Current Labor Statistics table 7 (Duration of unemployment) and part 1 of table 28 (Consumer Price Index for All Urban Consumers) were inadvertently omitted. Data from the tables can be obtained by clicking the CLS button on the *Review's* homepage at

http://www/bls.gov/opub/mlr/mlrhome.htm

or by e-mail to mlr@bls.gov.

1. Labor market indicators

Selected indicators	1998	1999	1998			1999				2000	
			II	III	IV	I	II	III	IV	I	II
Employment data											
Employment status of the civilian noninstitutionalized population (household survey):[1]											
Labor force participation rate	67.1	67.1	67.0	67.0	67.1	67.2	67.1	67.0	67.0	67.5	67.3
Employment-population ratio	64.1	64.3	64.1	64.0	64.1	64.3	64.2	64.2	64.3	64.7	64.6
Unemployment rate	4.5	4.2	4.4	4.5	4.4	4.3	4.3	4.2	4.1	4.1	4.0
Men	4.4	4.1	4.3	4.5	4.3	4.2	4.2	4.1	4.0	4.0	3.9
16 to 24 years	11.1	10.3	10.7	11.5	10.6	10.4	10.4	10.0	10.4	9.7	9.7
25 years and over	3.2	3.0	3.1	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.8
Women	4.6	4.3	4.6	4.5	4.6	4.4	4.4	4.4	4.2	4.2	4.1
16 to 24 years	9.8	9.5	9.7	9.9	9.4	9.8	9.2	9.5	9.4	9.6	9.0
25 years and over	3.6	3.3	3.6	3.5	3.6	3.4	3.4	3.3	3.1	3.2	3.2
Employment, nonfarm (payroll data), in thousands:[1]											
Total	125,865	128,786	125,486	126,180	126,967	127,800	128,430	129,073	129,783	130,626	131,537
Private sector	106,042	108,616	105,726	106,321	107,016	107,741	108,319	108,874	109,507	110,195	110,711
Goods-producing	25,414	25,482	25,427	25,408	25,469	25,488	25,454	25,459	25,524	25,680	25,704
Manufacturing	18,805	18,543	18,871	18,765	18,716	18,632	18,543	18,516	18,482	18,481	18,487
Service-producing	100,451	103,304	100,059	100,772	101,498	102,312	102,976	103,614	104,259	104,946	105,833
Average hours:											
Private sector	34.6	34.5	34.6	34.6	34.6	34.5	34.5	34.5	34.5	34.5	34.5
Manufacturing	41.7	41.7	41.7	41.7	41.7	41.6	41.7	41.8	41.7	41.7	41.7
Overtime	4.6	4.6	4.6	4.6	4.5	4.5	4.6	4.6	4.7	4.6	4.7
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)	3.4	3.4	.8	1.2	.6	.4	1.0	1.1	.9	1.3	–
Private industry workers	3.5	3.4	.9	1.1	.6	.4	1.1	.9	.9	1.5	–
Goods-producing[3]	2.8	3.4	.8	.7	.5	.8	.7	.9	1.0	1.6	–
Service-producing[3]	3.8	3.4	.8	1.3	.6	.3	1.3	.9	.8	1.4	–
State and local government workers	3.0	3.4	.3	1.5	.6	.5	.4	1.5	1.0	.6	–
Workers by bargaining status (private industry):											
Union	3.0	2.7	1.0	1.1	.5	.4	.7	.9	.7	1.3	–
Nonunion	3.5	3.6	.8	1.1	.6	.5	1.2	.9	1.0	1.5	–

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

NOTE: Dash indicates data not available.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	1998	1999	1998				1999				2000
			I	II	III	IV	I	II	III	IV	I
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm	3.4	3.4	0.8	0.8	1.2	0.6	0.4	1.0	1.1	0.9	1.3
Private nonfarm	3.5	3.4	.9	.9	1.1	.6	.4	1.1	.9	.9	1.5
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.7	3.5	.9	.7	1.3	.7	.5	1.0	1.1	.8	1.1
Private nonfarm	3.9	3.5	1.1	.9	1.3	.6	.5	1.2	.9	.9	1.2
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	1.6	2.7	.6	.5	.4	.2	.7	.7	1.0	.2	1.7
Producer Price Index:											
Finished goods	.0	2.9	−.8	.5	−.1	.4	.0	1.2	1.5	.1	1.6
Finished consumer goods	.0	3.8	−1.0	.8	.0	.2	.0	1.8	2.2	−.2	2.0
Capital equipment	.0	.3	.0	−.5	−.4	.9	−.1	−.4	−.4	1.2	.1
Intermediate materials, supplies, and components	−3.3	3.7	−1.4	.2	−.5	−1.6	−.2	1.9	1.9	.1	2.0
Crude materials	−16.7	15.3	−8.8	−1.8	−5.6	−2.5	−.1	9.4	10.2	−3.5	9.5
Productivity data[3]											
Output per hour of all persons:											
Business sector	2.9	3.2	4.8	.7	3.5	4.3	2.9	.8	4.7	6.6	1.8
Nonfarm business sector	2.8	3.0	4.7	1.0	3.2	4.1	2.7	.5	5.0	6.9	2.4
Nonfinancial corporations[4]	4.0	4.0	3.7	3.9	5.9	3.1	4.1	3.4	4.0	5.1	3.6

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ending—					
	1998	1999				2000	1998	1999				2000
	IV	I	II	III	IV	I	IV	I	II	III	IV	I
Average hourly compensation:[1]												
All persons, business sector	4.9	4.9	5.1	4.5	3.3	3.5	5.4	5.4	5.3	4.9	4.5	4.1
All persons, nonfarm business sector	4.6	4.2	4.7	4.6	3.8	4.1	5.4	5.2	4.9	4.5	4.3	4.3
Employment Cost Index—compensation:												
Civilian nonfarm[2]	.6	.4	1.0	1.1	.9	1.3	3.4	3.0	3.2	3.1	3.4	4.3
Private nonfarm	.6	.4	1.1	.9	.9	1.5	3.5	3.0	3.3	3.1	3.4	4.6
Union	.5	.4	.7	.9	.7	1.3	3.0	3.0	2.7	2.5	2.7	3.6
Nonunion	.6	.5	1.2	.9	1.0	1.5	3.5	3.0	3.4	3.2	3.6	4.7
State and local governments	.6	.5	.4	1.5	1.0	.6	3.0	2.9	3.0	2.9	3.4	3.6
Employment Cost Index—wages and salaries:												
Civilian nonfarm[2]	.7	.5	1.0	1.1	.8	1.1	3.7	3.3	3.6	3.3	3.5	4.0
Private nonfarm	.6	.5	1.2	.9	.9	1.2	3.9	3.3	3.6	3.2	3.5	4.2
Union	.5	.4	.8	.7	.6	.5	3.3	3.1	3.1	2.5	2.6	2.7
Nonunion	.7	.5	1.2	.9	.9	1.3	4.0	3.3	3.7	3.3	3.6	4.4
State and local governments	.7	.4	.4	1.9	.9	.6	3.1	2.9	3.1	3.3	3.6	3.8

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
TOTAL															
Civilian noninstitutional population[1]	205,220	207,753	207,427	207,632	207,828	208,038	208,265	208,483	208,666	208,832	208,782	208,907	209,053	209,216	209,371
Civilian labor force	137,673	139,368	139,013	139,332	139,336	139,372	139,475	139,697	139,834	140,108	140,910	141,165	140,867	141,230	140,489
Participation rate	67.1	67.1	67.0	67.1	67.0	67.0	67.0	67.0	67.0	67.1	67.5	67.6	67.4	67.5	67.1
Employed	131,463	133,488	133,190	133,398	133,399	133,530	133,650	133,940	134,098	134,420	135,221	135,362	135,159	135,706	134,715
Employment-population ratio[2]	64.1	64.3	64.2	64.2	64.2	64.2	64.2	64.2	64.3	64.4	64.8	64.8	64.7	64.9	64.3
Unemployed	6,210	5,880	5,823	5,934	5,937	5,842	5,825	5,757	5,736	5,688	5,689	5,804	5,708	5,524	5,774
Unemployment rate	4.5	4.2	4.2	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1
Not in the labor force	67,547	68,385	68,414	68,300	68,492	68,666	68,790	68,786	68,832	68,724	67,872	67,742	68,187	67,986	68,882
Men, 20 years and over															
Civilian noninstitutional population[1]	90,790	91,555	91,368	91,487	91,561	91,692	91,793	91,896	91,986	92,052	92,057	92,092	92,145	92,303	92,408
Civilian labor force	69,715	70,194	69,978	70,116	70,167	70,240	70,328	70,339	70,388	70,529	70,917	71,120	70,822	70,761	70,603
Participation rate	76.8	76.7	76.6	76.6	76.6	76.6	76.6	76.5	76.5	76.6	77.0	77.2	76.9	76.7	76.4
Employed	67,135	67,761	67,470	67,645	67,703	67,768	67,943	67,898	68,037	68,197	68,585	68,691	68,480	68,481	68,230
Employment-population ratio[2]	73.9	74.0	73.8	73.9	73.9	73.9	74.0	73.9	74.0	74.1	74.5	74.6	74.3	74.2	73.8
Agriculture	2,350	2,244	2,224	2,246	2,256	2,237	2,189	2,206	2,262	2,227	2,303	2,309	2,232	2,213	2,217
Nonagricultural industries	64,785	65,517	65,246	65,399	65,447	65,531	65,754	65,692	65,775	65,970	66,282	66,382	66,249	66,269	66,013
Unemployed	2,580	2,433	2,508	2,471	2,464	2,472	2,385	2,441	2,351	2,332	2,332	2,429	2,342	2,280	2,373
Unemployment rate	3.7	3.5	3.6	3.5	3.5	3.5	3.4	3.5	3.3	3.3	3.3	3.4	3.3	3.2	3.4
Women, 20 years and over															
Civilian noninstitutional population[1]	98,786	100,158	100,008	100,131	100,203	100,285	100,385	100,458	100,573	100,666	100,579	100,666	100,713	100,809	100,929
Civilian labor force	59,702	60,840	60,708	60,988	60,852	60,904	60,860	60,955	61,052	61,154	61,576	61,575	61,671	61,920	61,614
Participation rate	60.4	60.7	60.7	60.9	60.7	60.7	60.6	60.7	60.7	60.7	61.2	61.2	61.2	61.4	61.0
Employed	57,278	58,555	58,483	58,647	58,477	58,648	58,630	58,800	58,838	58,958	59,280	59,398	59,422	59,757	59,248
Employment-population ratio[2]	58.0	58.5	58.5	58.6	58.4	58.5	58.4	58.5	58.5	58.6	58.9	59.0	59.0	59.3	58.7
Agriculture	768	803	820	851	798	780	778	800	768	791	826	871	894	899	864
Nonagricultural industries	56,510	57,752	57,663	57,796	57,679	57,868	57,852	58,000	58,070	58,167	58,454	58,526	58,528	58,858	58,383
Unemployed	2,424	2,285	2,225	2,341	2,375	2,256	2,230	2,155	2,214	2,196	2,297	2,178	2,249	2,163	2,367
Unemployment rate	4.1	3.8	3.7	3.8	3.9	3.7	3.7	3.5	3.6	3.6	3.7	3.5	3.6	3.5	3.8
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,644	16,040	16,051	16,014	16,065	16,061	16,086	16,129	16,107	16,114	16,147	16,149	16,196	16,104	16,034
Civilian labor force	8,256	8,333	8,327	8,228	8,317	8,228	8,287	8,403	8,394	8,425	8,416	8,470	8,374	8,549	8,271
Participation rate	52.8	52.0	51.9	51.4	51.8	51.2	51.5	52.1	52.1	52.3	52.1	52.4	51.7	53.1	51.6
Employed	7,051	7,172	7,237	7,106	7,219	7,114	7,077	7,242	7,223	7,265	7,356	7,273	7,257	7,467	7,237
Employment-population ratio[2]	45.1	44.7	45.1	44.4	44.9	44.3	44.0	44.9	44.8	45.1	45.6	45.0	44.8	46.4	45.1
Agriculture	261	234	246	233	224	217	212	232	280	261	242	228	233	243	217
Nonagricultural industries	6,790	6,938	6,991	6,873	6,995	6,897	6,865	7,010	6,943	7,004	7,114	7,046	7,024	7,224	7,020
Unemployed	1,205	1,162	1,090	1,122	1,098	1,114	1,210	1,161	1,171	1,160	1,060	1,197	1,117	1,082	1,034
Unemployment rate	14.6	13.9	13.1	13.6	13.2	13.5	14.6	13.8	14.0	13.8	12.6	14.1	13.3	12.7	12.5
White															
Civilian noninstitutional population[1]	171,478	173,085	172,859	172,999	173,133	173,275	173,432	173,585	173,709	173,821	173,812	173,886	173,983	174,092	174,197
Civilian labor force	115,415	116,509	116,193	116,518	116,492	116,619	116,495	116,654	116,703	117,008	117,716	117,821	117,832	117,988	117,097
Participation rate	67.3	67.3	67.2	67.4	67.3	67.3	67.2	67.2	67.2	67.3	67.7	67.8	67.7	67.8	67.2
Employed	110,931	112,235	111,898	112,115	112,193	112,308	112,303	112,548	112,611	112,951	113,704	113,634	113,630	113,915	112,988
Employment-population ratio[2]	64.7	64.8	64.7	64.8	64.8	64.8	64.8	64.8	64.8	65.0	65.4	65.3	65.3	65.4	64.9
Unemployed	4,484	4,273	4,295	4,403	4,299	4,311	4,192	4,106	4,092	4,057	4,011	4,187	4,202	4,073	4,108
Unemployment rate	3.9	3.7	3.7	3.8	3.7	3.7	3.6	3.5	3.5	3.5	3.4	3.6	3.6	3.5	3.5
Black															
Civilian noninstitutional population[1]	24,373	24,855	24,798	24,833	24,867	24,904	24,946	24,985	25,019	25,051	25,047	25,076	25,105	25,135	25,161
Civilian labor force	15,982	16,365	16,290	16,308	16,366	16,321	16,474	16,489	16,508	16,513	16,622	16,785	16,572	16,636	16,596
Participation rate	65.6	65.8	65.7	65.7	65.8	65.5	66.0	66.0	66.0	65.9	66.4	66.9	66.0	66.2	66.0
Employed	14,556	15,056	15,053	15,069	14,962	15,047	15,114	15,124	15,187	15,204	15,254	15,471	15,356	15,444	15,261
Employment-population ratio[2]	59.7	60.6	60.7	60.7	60.2	60.4	60.6	60.5	60.7	60.7	60.9	61.7	61.2	61.4	60.7
Unemployed	1,426	1,309	1,237	1,239	1,404	1,274	1,360	1,365	1,321	1,309	1,368	1,314	1,216	1,191	1,335
Unemployment rate	8.9	8.0	7.6	7.6	8.6	7.8	8.3	8.3	8.0	7.9	8.2	7.8	7.3	7.2	8.0

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Hispanic origin															
Civilian noninstitutional population[1]	21,070	21,650	21,548	21,618	21,684	21,752	21,820	21,881	21,947	22,008	22,047	22,108	22,166	22,231	22,292
Civilian labor force	14,317	14,665	14,555	14,624	14,617	14,710	14,766	14,809	14,887	14,984	15,251	15,249	15,313	15,355	15,322
Participation rate	67.9	67.7	67.5	67.6	67.4	67.6	67.7	67.7	67.8	68.1	69.2	69.0	69.1	69.1	68.7
Employed	13,291	13,720	13,574	13,655	13,696	13,759	13,795	13,879	13,979	14,095	14,395	14,382	14,355	14,524	14,432
Employment-population ratio[2]	63.1	63.4	63.0	63.2	63.2	63.3	63.2	63.4	63.7	64.0	65.3	65.1	64.8	65.3	64.7
Unemployed	1,026	945	981	969	921	951	971	930	908	889	856	868	958	831	890
Unemployment rate	7.2	6.4	6.7	6.6	6.3	6.5	6.6	6.3	6.1	5.9	5.6	5.7	6.3	5.4	5.8

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Characteristic															
Employed, 16 years and over	131,463	133,488	133,190	133,398	133,399	133,530	133,650	133,940	134,098	134,420	135,221	135,362	135,159	135,706	134,715
Men	70,693	71,446	71,207	71,330	71,437	71,436	71,630	71,623	71,732	71,927	72,358	72,473	72,313	72,307	71,948
Women	60,771	62,042	61,983	62,068	61,962	62,094	62,020	62,317	62,366	62,493	62,863	62,889	62,846	63,399	62,767
Married men, spouse present	42,923	43,254	42,997	43,279	43,350	43,368	43,367	43,206	43,273	43,283	43,951	43,535	43,297	43,272	43,216
Married women, spouse present	32,872	33,450	33,442	33,758	33,387	33,504	33,275	33,521	33,635	33,762	34,166	33,882	33,780	33,877	33,786
Women who maintain families	7,904	8,229	8,081	8,028	8,272	8,335	8,312	8,398	8,526	8,375	8,362	8,220	8,082	8,307	8,301
Class of worker															
Agriculture:															
Wage and salary workers	2,000	1,944	1,930	1,923	1,939	1,908	1,930	1,936	2,049	2,018	2,024	2,025	2,043	2,054	2,006
Self-employed workers	1,341	1,297	1,330	1,341	1,292	1,266	1,198	1,267	1,216	1,211	1,320	1,344	1,292	1,272	1,252
Unpaid family workers	38	40	36	39	45	46	40	42	41	36	38	51	42	43	38
Nonagricultural industries:															
Wage and salary workers	119,019	121,323	121,311	121,006	121,188	121,150	121,583	121,654	121,965	122,426	122,823	123,166	123,169	123,623	122,860
Government	18,383	18,903	18,771	19,007	19,032	19,114	19,080	18,817	18,902	18,959	19,013	19,394	19,598	19,280	19,169
Private industries	100,637	102,420	102,540	101,999	102,156	102,036	102,503	102,837	103,063	103,467	103,810	103,772	103,571	104,343	103,691
Private households	962	933	914	983	944	873	1,035	939	944	948	952	1,016	998	1,019	953
Other	99,674	101,487	101,626	101,016	101,212	101,163	101,468	101,898	102,119	102,519	102,858	102,756	102,573	103,324	102,783
Self-employed workers	8,962	8,790	8,726	8,840	8,820	9,000	8,791	8,833	8,686	8,662	8,802	8,793	8,704	8,750	8,714
Unpaid family workers	103	95	61	88	77	93	100	101	108	98	92	74	107	103	82
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,665	3,357	3,399	3,377	3,316	3,279	3,283	3,179	3,274	3,320	3,219	3,139	3,124	3,124	3,248
Slack work or business conditions	2,095	1,968	1,950	2,048	1,974	1,904	1,922	1,928	1,930	1,951	1,893	1,807	1,820	1,844	1,962
Could only find part-time work	1,258	1,079	1,116	1,045	1,050	1,057	1,073	993	1,032	1,025	1,012	1,023	953	1,016	978
Part time for noneconomic reasons	18,530	18,758	18,692	18,716	18,983	19,230	18,801	18,799	18,651	18,618	18,889	19,031	18,770	18,474	18,409
Nonagricultural industries:															
Part time for economic reasons	3,501	3,189	3,229	3,209	3,142	3,127	3,112	2,983	3,105	3,157	3,066	2,985	3,003	3,021	3,096
Slack work or business conditions	1,997	1,861	1,845	1,902	1,850	1,813	1,806	1,807	1,815	1,843	1,801	1,705	1,766	1,782	1,840
Could only find part-time work	1,228	1,056	1,089	1,031	1,034	1,041	1,063	964	1,013	1,018	966	1,005	922	989	962
Part time for noneconomic reasons	17,954	18,197	18,138	18,106	18,466	18,652	18,273	18,249	18,083	18,061	18,347	18,406	18,184	17,943	17,853

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Characteristic															
Total, 16 years and over	4.5	4.2	4.2	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1
Both sexes, 16 to 19 years	14.6	13.9	13.1	13.6	13.2	13.5	14.6	13.8	14.0	13.8	12.6	14.1	13.3	12.7	12.5
Men, 20 years and over	3.7	3.5	3.6	3.5	3.5	3.5	3.4	3.5	3.3	3.3	3.3	3.4	3.3	3.2	3.4
Women, 20 years and over	4.1	3.8	3.7	3.8	3.9	3.7	3.7	3.5	3.6	3.6	3.7	3.5	3.6	3.5	3.8
White, total	3.9	3.7	3.7	3.8	3.7	3.7	3.6	3.5	3.5	3.5	3.4	3.6	3.6	3.5	3.5
Both sexes, 16 to 19 years	12.6	12.0	11.4	12.0	11.4	11.7	12.3	11.8	12.0	12.2	10.8	12.5	11.7	11.6	10.6
Men, 16 to 19 years	14.1	12.6	12.2	12.0	11.7	12.3	12.7	11.9	12.8	13.3	12.4	14.4	11.3	13.0	10.7
Women, 16 to 19 years	10.9	11.3	10.6	12.0	11.1	11.0	11.9	11.7	11.2	10.9	9.1	10.4	12.1	10.0	10.5
Men, 20 years and over	3.2	3.0	3.1	3.2	3.1	3.2	2.9	2.9	2.8	2.8	2.8	2.9	2.9	2.8	2.8
Women, 20 years and over	3.4	3.3	3.3	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.1	3.1	3.2	3.1	3.3
Black, total	8.9	8.0	7.6	7.6	8.6	7.8	8.3	8.3	8.0	7.9	8.2	7.8	7.3	7.2	8.0
Both sexes, 16 to 19 years	27.6	27.9	25.2	24.8	26.9	28.1	30.8	30.8	28.4	25.3	23.9	24.3	25.1	22.2	23.9
Men, 16 to 19 years	30.1	30.9	27.9	28.8	30.7	29.6	30.3	35.3	31.0	27.5	24.0	22.3	21.3	22.0	27.7
Women, 16 to 19 years	25.3	25.1	22.5	21.2	23.4	26.7	31.4	26.1	25.9	23.0	23.8	26.6	28.9	22.4	20.2
Men, 20 years and over	7.4	6.7	6.6	6.4	7.2	6.3	7.1	7.7	7.0	7.0	7.4	7.1	6.4	6.6	7.2
Women, 20 years and over	7.9	6.8	6.5	6.7	7.7	6.9	6.7	6.1	6.6	6.7	7.2	6.5	6.1	5.8	7.0
Hispanic origin, total	7.2	6.4	6.7	6.6	6.3	6.5	6.6	6.3	6.1	5.9	5.6	5.7	6.3	5.4	5.8
Married men, spouse present	2.4	2.2	2.3	2.2	2.3	2.3	2.2	2.2	2.1	2.2	2.0	2.1	2.0	1.8	1.9
Married women, spouse present	2.9	2.7	2.6	2.7	2.8	2.7	2.6	2.5	2.5	2.5	2.6	2.6	2.7	2.6	2.9
Women who maintain families	7.2	6.4	6.0	6.5	6.4	6.3	6.4	6.0	6.0	6.2	6.2	6.1	6.8	6.3	6.5
Full-time workers	4.3	4.1	4.0	4.0	4.1	4.1	4.0	4.0	3.9	3.9	3.9	3.9	3.8	3.8	3.9
Part-time workers	5.3	5.0	5.2	5.3	4.9	4.6	5.0	4.7	4.9	4.9	4.6	4.9	5.1	4.6	5.3
Industry															
Nonagricultural wage and salary workers	4.6	4.3	4.3	4.4	4.4	4.2	4.3	4.2	4.2	4.1	4.2	4.2	4.3	4.0	4.2
Mining	3.2	5.7	5.9	4.8	6.0	4.2	6.7	5.0	4.6	4.1	2.6	4.0	2.5	2.8	4.2
Construction	7.5	7.0	7.2	7.3	6.9	7.6	6.9	6.7	5.7	6.6	6.4	7.5	6.9	5.2	5.8
Manufacturing	3.9	3.6	3.5	3.7	3.5	3.8	3.9	3.7	3.7	3.6	3.2	3.3	3.9	4.0	3.7
Durable goods	3.4	3.5	3.4	3.5	3.7	3.7	4.0	3.5	3.7	3.6	2.8	3.0	3.0	3.9	3.6
Nondurable goods	4.7	3.9	3.8	4.0	3.1	4.1	3.9	4.0	3.7	3.5	3.9	3.8	5.2	4.1	3.7
Transportation and public utilities	3.4	3.0	3.2	2.9	3.4	3.0	2.8	3.1	3.3	3.0	3.7	3.2	3.1	2.9	3.2
Wholesale and retail trade	5.5	5.2	5.3	5.3	5.2	4.8	5.2	4.9	5.3	5.2	5.1	5.3	5.4	4.9	5.1
Finance, insurance, and real estate	2.5	2.3	2.2	2.4	2.4	2.4	2.3	2.3	2.3	2.1	2.5	2.9	2.4	2.6	2.4
Services	4.5	4.1	4.0	4.2	4.4	4.0	4.1	4.0	3.9	3.8	4.2	3.7	4.0	3.7	4.1
Government workers	2.3	2.2	2.5	2.3	2.2	2.1	2.0	2.1	2.0	2.1	2.1	2.2	1.7	1.7	2.0
Agricultural wage and salary workers	8.3	8.9	10.1	9.3	9.0	9.6	5.7	7.7	8.3	7.1	5.0	6.5	5.6	8.4	7.6
Educational attainment[1]															
Less than a high school diploma	7.1	6.7	6.8	6.8	6.8	7.0	6.8	6.6	6.5	6.0	6.6	6.0	6.9	6.1	7.0
High school graduates, no college	4.0	3.5	3.6	3.8	3.6	3.5	3.5	3.3	3.3	3.5	3.5	3.5	3.4	3.4	3.6
Some college, less than a bachelor's degree	3.0	2.8	2.8	2.6	3.0	3.1	2.7	2.7	2.7	2.5	2.6	2.9	2.7	2.6	2.5
College graduates	1.8	1.8	1.8	2.0	1.8	1.6	1.7	1.7	1.7	1.8	1.8	1.6	1.6	1.5	1.6

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov,	Dec.	Jan.	Feb.	Mar.	Apr.	May
Less than 5 weeks	2,622	2,568	2,502	2,540	2,640	2,599	2,582	2,545	2,601	2,620	2,447	2,603	2,824	2,455	2,531
5 to 14 weeks	1,950	1,832	1,832	1,775	1,778	1,798	1,805	1,811	1,760	1,694	1,754	1,864	1,719	1,868	1,953
15 weeks and over	1,637	1,480	1,519	1,634	1,511	1,463	1,412	1,434	1,401	1,388	1,372	1,277	1,295	1,250	1,337
15 to 26 weeks	763	755	784	806	779	747	708	719	725	693	667	673	657	670	677
27 weeks and over	875	725	735	828	732	716	704	715	676	695	705	604	637	580	660
Mean duration, in weeks	14.5	13.4	13.4	14.3	13.5	13.2	13.0	13.2	13.0	12.9	13.2	12.5	12.8	12.4	12.6
Median duration, in weeks	6.7	6.4	6.6	6.3	5.8	6.4	5.9	6.3	6.2	5.9	5.7	6.1	6.0	6.0	5.8

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Job losers[1]	2,822	2,622	2,678	2,670	2,670	2,629	2,573	2,518	2,493	2,401	2,477	2,616	2,541	2,306	2,483
On temporary layoff	866	848	837	876	847	893	869	802	851	795	739	838	781	703	894
Not on temporary layoff	1,957	1,774	1,841	1,794	1,823	1,736	1,704	1,716	1,642	1,606	1,739	1,778	1,759	1,602	1,589
Job leavers	734	783	781	831	768	793	758	778	821	825	776	759	824	883	774
Reentrants	2,132	2,005	2,034	2,038	2,003	1,942	1,967	1,958	1,935	2,036	2,043	1,975	1,979	1,961	2,093
New entrants	520	469	440	359	459	481	504	511	485	453	393	387	434	408	500
Percent of unemployed															
Job losers[1]	45.5	44.6	45.1	45.3	45.3	45.0	44.3	43.7	43.5	42.0	43.5	45.6	44.0	41.9	42.4
On temporary layoff	13.9	14.4	14.1	14.9	14.4	15.3	15.0	13.9	14.8	13.9	13.0	14.6	13.5	12.8	15.3
Not on temporary layoff	31.5	30.2	31.0	30.4	30.9	29.7	29.4	29.8	28.6	28.1	30.6	31.0	30.5	29.1	27.2
Job leavers	11.8	13.3	13.2	14.1	13.0	13.6	13.1	13.5	14.3	14.4	13.6	13.2	14.3	15.1	13.2
Reentrants	34.3	34.1	34.3	34.6	33.9	33.2	33.9	34.0	33.7	35.6	35.9	34.4	34.3	35.6	35.8
New entrants	8.4	8.0	7.4	6.1	7.8	8.2	8.7	8.9	8.5	7.9	6.9	6.7	7.5	7.4	8.5
Percent of civilian labor force															
Job losers[1]	2.1	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.8	1.9	1.8	1.6	1.8
Job leavers	.5	.6	.6	.6	.6	.6	.5	.6	.6	.6	.6	.5	.6	.6	.6
Reentrants	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.5
New entrants	.4	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.4

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Total, 16 years and over	4.5	4.2	4.2	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.1	4.1	3.9	4.1
16 to 24 years	10.4	9.9	9.6	9.8	9.7	9.6	10.0	10.0	10.0	9.8	9.3	10.0	9.7	9.3	9.8
16 to 19 years	14.6	13.9	13.1	13.6	13.2	13.5	14.6	13.9	14.0	13.8	12.6	14.1	13.3	12.7	12.5
16 to 17 years	17.2	16.3	16.1	16.3	15.4	15.9	16.1	15.9	16.5	16.5	14.0	15.9	15.3	14.6	16.0
18 to 19 years	12.8	12.4	11.2	11.8	11.7	12.1	13.8	12.4	12.3	12.1	11.4	12.8	12.1	11.4	10.4
20 to 24 years	7.9	7.5	7.5	7.6	7.6	7.3	7.2	7.7	7.7	7.4	7.4	7.5	7.6	7.2	8.2
25 years and over	3.4	3.1	3.2	3.2	3.2	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0	2.9	3.0
25 to 54 years	3.5	3.2	3.2	3.3	3.3	3.2	3.2	3.1	3.1	3.0	3.1	3.0	3.0	3.0	3.1
55 years and over	2.7	2.8	2.7	3.0	2.9	2.7	2.6	2.7	2.6	2.7	2.8	3.0	2.7	2.4	2.4
Men, 16 years and over	4.4	4.1	4.2	4.1	4.1	4.1	4.0	4.1	4.0	4.0	3.9	4.1	3.8	3.8	3.9
16 to 24 years	11.1	10.3	10.2	10.5	10.2	9.9	9.9	10.4	10.2	10.6	9.7	10.3	9.2	9.6	10.0
16 to 19 years	16.2	14.7	13.9	14.3	13.8	13.9	14.6	14.2	14.9	15.2	14.0	15.5	12.4	13.6	13.1
16 to 17 years	19.1	17.0	17.6	16.8	16.1	16.2	16.6	15.5	16.9	17.7	14.3	17.3	15.1	15.8	16.9
18 to 19 years	14.1	13.1	11.5	12.7	12.2	12.6	13.2	13.2	13.6	13.5	13.7	13.9	10.5	12.4	10.8
20 to 24 years	8.1	7.7	8.0	8.3	8.1	7.6	7.2	8.2	7.5	7.8	7.2	7.3	7.4	7.3	8.3
25 years and over	3.2	3.0	3.1	3.0	3.0	3.1	3.0	2.9	2.8	2.8	2.8	2.9	2.8	2.7	2.8
25 to 54 years	3.3	3.0	3.1	3.0	3.0	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.7	2.8
55 years and over	2.8	2.8	2.8	2.7	3.0	2.9	2.9	2.8	2.6	2.5	2.5	2.8	2.8	2.7	2.6
Women, 16 years and over	4.6	4.3	4.2	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.2	4.1	4.3	4.0	4.3
16 to 24 years	9.8	9.5	8.9	9.1	9.1	9.3	10.0	9.6	9.8	8.9	8.9	9.6	10.2	8.9	9.5
16 to 19 years	12.9	13.2	12.2	13.0	12.6	13.2	14.7	13.4	13.0	12.2	11.1	12.6	14.4	11.6	11.8
16 to 17 years	15.1	15.5	14.5	15.7	14.7	15.6	15.6	16.3	16.1	15.1	13.7	14.3	15.4	13.3	15.0
18 to 19 years	11.5	11.6	10.9	10.9	11.2	11.6	14.5	11.4	10.8	10.5	8.9	11.6	13.7	10.4	9.9
20 to 24 years	7.8	7.2	6.9	6.8	7.1	7.0	7.2	7.2	7.9	7.0	7.6	7.8	7.7	7.2	8.2
25 years and over	3.6	3.3	3.3	3.5	3.5	3.3	3.2	3.1	3.1	3.2	3.2	3.0	3.2	3.0	3.3
25 to 54 years	3.8	3.4	3.4	3.5	3.6	3.4	3.4	3.2	3.3	3.2	3.3	3.0	3.3	3.2	3.5
55 years and over	2.6	2.8	2.6	3.3	2.9	2.4	2.1	2.5	2.6	2.9	3.1	3.3	2.7	2.0	2.3

10. Unemployment rates by State, seasonally adjusted

State	Apr. 1999	Mar. 2000	Apr. 2000[p]	State	Apr. 1999	Mar. 2000	Apr. 2000[p]
Alabama	4.9	4.2	4.1	Missouri	3.6	2.9	2.4
Alaska	6.6	6.0	6.6	Montana	5.3	4.8	4.9
Arizona	4.6	3.9	3.6	Nebraska	3.0	2.4	2.9
Arkansas	4.6	4.7	4.4	Nevada	4.5	3.8	3.8
California	5.4	5.0	4.8	New Hampshire	2.8	2.2	2.5
Colorado	3.0	2.7	2.8	New Jersey	4.6	3.7	3.8
Connecticut	3.3	2.3	2.3	New Mexico	5.6	5.3	5.5
Delaware	3.6	3.2	3.6	New York	5.2	4.6	4.6
District of Columbia	6.5	5.8	5.5	North Carolina	3.0	3.4	3.0
Florida	3.9	3.8	3.8	North Dakota	3.5	2.9	2.8
Georgia	4.1	3.4	3.5	Ohio	4.3	4.1	3.8
Hawaii	5.8	4.7	4.3	Oklahoma	3.6	3.1	2.8
Idaho	5.5	4.0	4.4	Oregon	5.8	4.7	4.6
Illinois	4.2	4.4	4.3	Pennsylvania	4.4	3.9	3.8
Indiana	3.0	3.2	3.4	Rhode Island	4.0	3.8	3.7
Iowa	2.6	2.1	2.2	South Carolina	4.5	3.7	3.5
Kansas	2.9	3.2	3.3	South Dakota	3.0	2.1	2.3
Kentucky	4.7	3.9	3.9	Tennessee	4.1	3.5	3.7
Louisiana	5.4	5.2	4.4	Texas	4.6	4.6	4.5
Maine	4.2	3.5	3.3	Utah	4.0	2.9	2.7
Maryland	3.7	3.0	3.2	Vermont	2.8	2.4	2.4
Massachusetts	3.1	2.4	2.8	Virginia	2.7	2.7	2.7
Michigan	3.8	2.9	3.0	Washington	4.8	4.5	4.6
Minnesota	2.7	2.7	2.6	West Virginia	6.9	5.1	5.1
Mississippi	5.1	5.5	5.5	Wisconsin	3.0	3.1	3.4
				Wyoming	4.9	4.0	4.0

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

State	Apr. 1999	Mar. 2000	Apr. 2000[p]	State	Apr. 1999	Mar. 2000	Apr. 2000[p]
Alabama	1,913.3	1,948.0	1,947.2	Missouri	2,715.7	2,746.5	2,748.4
Alaska	276.2	279.9	282.8	Montana	379.9	389.8	389.8
Arizona	2,141.6	2,227.3	2,244.3	Nebraska	887.9	895.2	293.9
Arkansas	1,137.5	1,165.0	1,167.3	Nevada	975.3	1,012.5	1,013.4
California	13,900.0	14,270.1	14,334.5	New Hampshire	603.9	612.4	613.2
Colorado	2,119.4	2,188.9	2,199.0	New Jersey	3,854.5	3,911.7	3,923.3
Connecticut	1,669.1	1,692.1	1,691.7	New Mexico	727.6	739.4	741.6
Delaware	410.1	421.2	422.4	New York	8,428.0	8,577.9	8,594.0
District of Columbia	612.6	619.9	619.6	North Carolina	3,851.9	3,911.4	3,923.4
Florida	6,806.3	7,087.5	7,109.9	North Dakota	323.9	325.2	325.5
Georgia	3,858.3	3,995.8	4,010.4	Ohio	5,541.0	5,590.6	5,600.3
Hawaii	530.6	539.7	541.0	Oklahoma	1,455.1	1,484.3	1,485.8
Idaho	533.6	555.1	556.2	Oregon	1,566.8	1,588.0	1,591.2
Illinois	5,953.4	6,001.8	6,011.8	Pennsylvania	5,573.0	5,622.7	5,617.6
Indiana	2,959.9	2,985.3	2,991.2	Rhode Island	463.8	469.0	471.8
Iowa	1,467.8	1,484.6	1,489.7	South Carolina	1,824.5	1,868.3	1,867.9
Kansas	1,322.5	1,343.5	1,343.1	South Dakota	371.5	380.6	380.7
Kentucky	1,791.0	1,830.8	1,835.1	Tennessee	2,664.2	2,719.0	2,711.7
Louisiana	1,891.4	1,908.7	1,910.2	Texas	9,107.5	9,349.1	9,363.9
Maine	583.2	599.2	601.1	Utah	1,045.1	1,068.2	1,069.7
Maryland	2,375.9	2,435.0	2,440.9	Vermont	290.4	295.8	295.2
Massachusetts	3,225.6	3,274.7	3,293.6	Virginia	3,392.9	3,463.9	3,477.6
Michigan	4,525.1	4,554.7	4,570.6	Washington	2,632.8	2,679.9	2,677.5
Minnesota	2,601.5	2,651.2	2,654.8	West Virginia	726.2	732.4	731.7
Mississippi	1,152.7	1,159.6	1,156.7	Wisconsin	2,772.2	2,811.7	2,820.9
				Wyoming	231.5	237.3	235.6

[p] = preliminary

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]
TOTAL	125,865	128,786	128,377	128,630	128,898	129,057	129,265	129,523	129,788	130,038	130,387	130,482	131,009	131,419	131,590
PRIVATE SECTOR	106,042	108,616	108,274	108,507	108,735	108,846	109,042	109,275	109,517	109,730	110,036	110,088	110,462	110,752	110,587
GOODS-PRODUCING	25,414	25,482	25,436	25,432	25,488	25,430	25,460	25,483	25,527	25,561	25,677	25,624	25,738	25,725	25,687
Mining	590	535	532	529	528	526	527	529	527	530	530	533	536	539	537
Metal mining	49	45	45	45	45	44	45	45	45	45	45	45	45	45	44
Oil and gas extraction	339	293	289	287	286	286	287	289	288	291	293	296	300	303	304
Nonmetallic minerals, except fuels	110	112	112	112	112	112	112	112	112	111	111	111	111	111	110
Construction	6,020	6,404	6,364	6,388	6,408	6,401	6,439	6,470	6,516	6,552	6,652	6,618	6,726	6,694	6,670
General building contractors	1,377	1,450	1,444	1,447	1,451	1,447	1,458	1,464	1,470	1,474	1,498	1,491	1,508	1,497	1,496
Heavy construction, except building	840	869	861	866	867	865	866	872	876	882	892	885	905	899	891
Special trades contractors	3,804	4,084	4,059	4,075	4,090	4,089	4,115	4,134	4,170	4,196	4,262	4,242	4,313	4,298	4,283
Manufacturing	18,805	18,543	18,540	18,515	18,552	18,503	18,494	18,484	18,484	18,479	18,495	18,473	18,476	18,492	18,480
Production workers	12,952	12,739	12,741	12,711	12,753	12,706	12,700	12,702	12,702	12,701	12,713	12,697	12,683	12,689	12,683
Durable goods	11,205	11,103	11,091	11,083	11,125	11,097	11,090	11,083	11,085	11,087	11,099	11,088	11,094	11,104	11,107
Production workers	7,666	7,590	7,584	7,572	7,620	7,590	7,580	7,581	7,579	7,579	7,592	7,592	7,580	7,584	7,586
Lumber and wood products	814	828	827	827	829	829	830	831	831	831	830	832	830	830	828
Furniture and fixtures	533	548	546	547	554	551	551	553	553	552	553	553	555	557	558
Stone, clay, and glass products	562	563	563	562	563	563	563	562	564	565	568	567	568	567	567
Primary metal industries	715	700	699	698	701	699	697	697	698	698	699	699	701	699	699
Fabricated metal products	1,509	1,517	1,515	1,515	1,517	1,515	1,518	1,519	1,520	1,521	1,523	1,525	1,528	1,534	1,536
Industrial machinery and equipment	2,206	2,141	2,141	2,139	2,142	2,135	2,133	2,130	2,131	2,132	2,130	2,131	2,124	2,126	2,125
Computer and office equipment	382	370	372	373	371	370	370	369	370	370	369	368	366	364	360
Electronic and other electrical equipment	1,707	1,670	1,666	1,667	1,675	1,669	1,670	1,672	1,670	1,673	1,679	1,684	1,682	1,691	1,693
Electronic components and accessories	660	636	634	634	635	637	636	638	638	640	642	645	646	651	654
Transportation equipment	1,893	1,884	1,883	1,878	1,890	1,887	1,880	1,873	1,870	1,867	1,871	1,855	1,865	1,859	1,861
Motor vehicles and equipment	995	1,019	1,016	1,018	1,029	1,026	1,025	1,022	1,022	1,023	1,027	1,029	1,028	1,026	1,024
Aircraft and parts	525	495	503	496	493	488	483	478	473	470	469	453	467	461	463
Instruments and related products	873	856	857	856	859	854	852	849	850	849	847	844	844	844	845
Miscellaneous manufacturing industries	395	395	394	394	395	395	396	397	398	399	399	398	397	397	395
Nondurable goods	7,600	7,440	7,449	7,432	7,427	7,406	7,404	7,401	7,399	7,392	7,396	7,385	7,382	7,388	7,373
Production workers	5,287	5,149	5,157	5,139	5,133	5,116	5,120	5,121	5,123	5,122	5,121	5,105	5,103	5,105	5,097
Food and kindred products	1,683	1,677	1,677	1,674	1,674	1,667	1,673	1,673	1,675	1,674	1,681	1,672	1,671	1,678	1,676
Tobacco products	41	39	38	39	38	36	38	38	38	38	38	37	35	37	37
Textile mill products	598	560	562	560	557	556	552	550	552	549	548	549	549	548	545
Apparel and other textile products	766	692	699	693	688	681	678	674	672	669	666	665	665	665	660
Paper and allied products	677	668	669	668	668	667	666	665	665	665	664	663	662	662	661
Printing and publishing	1,565	1,553	1,551	1,551	1,552	1,552	1,551	1,551	1,549	1,548	1,549	1,550	1,551	1,554	1,552
Chemicals and allied products	1,043	1,034	1,035	1,033	1,032	1,030	1,031	1,032	1,031	1,030	1,031	1,031	1,031	1,030	1,027
Petroleum and coal products	139	134	134	133	134	132	133	133	132	132	132	132	132	132	132
Rubber and miscellaneous plastics products	1,005	1,006	1,006	1,003	1,008	1,008	1,005	1,008	1,009	1,011	1,011	1,010	1,010	1,007	1,008
Leather and leather products	84	78	78	78	76	77	77	77	76	76	76	76	76	75	75
SERVICE-PRODUCING	100,451	103,304	102,941	103,198	103,410	103,627	103,805	104,040	104,261	104,477	104,710	104,858	105,271	105,694	105,903
Transportation and public utilities	6,611	6,826	6,797	6,817	6,834	6,848	6,866	6,875	6,898	6,911	6,925	6,937	6,953	6,970	6,961
Transportation	4,273	4,409	4,392	4,408	4,420	4,426	4,436	4,441	4,453	4,459	4,470	4,479	4,492	4,509	4,498
Railroad transportation	231	230	232	232	229	227	226	226	226	226	225	225	222	221	219
Local and interurban passenger transit	469	485	483	485	486	488	488	489	490	491	493	494	494	498	498
Trucking and warehousing	1,744	1,805	1,798	1,803	1,808	1,810	1,816	1,818	1,823	1,818	1,827	1,828	1,833	1,839	1,832
Water transportation	181	187	185	187	188	188	189	190	190	192	192	196	197	200	200
Transportation by air	1,181	1,227	1,218	1,224	1,230	1,234	1,238	1,241	1,246	1,253	1,256	1,259	1,268	1,270	1,269
Pipelines, except natural gas	14	13	13	13	13	13	13	13	13	13	13	12	12	12	12
Transportation services	454	463	463	464	466	466	466	464	465	466	464	465	466	469	468
Communications and public utilities	2,338	2,416	2,405	2,409	2,414	2,422	2,430	2,434	2,445	2,452	2,455	2,458	2,461	2,461	2,463
Communications	1,477	1,552	1,541	1,544	1,551	1,558	1,565	1,572	1,581	1,588	1,591	1,598	1,602	1,604	1,607
Electric, gas, and sanitary services	861	865	864	865	863	864	865	862	864	864	864	860	859	857	856
Wholesale trade	6,800	6,924	6,898	6,905	6,927	6,946	6,962	6,973	6,989	7,002	7,005	7,011	7,033	7,055	7,047
Retail trade	22,295	22,788	22,763	22,810	22,833	22,841	22,844	22,863	22,893	22,936	22,973	22,987	23,027	23,197	23,081
Building materials and garden supplies	948	989	982	985	989	992	994	1,004	1,008	1,012	1,016	1,020	1,034	1,032	1,022
General merchandise stores	2,730	2,771	2,781	2,777	2,774	2,768	2,757	2,752	2,752	2,766	2,765	2,762	2,756	2,791	2,762
Department stores	2,415	2,431	2,444	2,439	2,433	2,426	2,414	2,408	2,406	2,416	2,419	2,417	2,409	2,443	2,406

See footnotes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		1999									2000			
	1998	1999	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[p]	Apr.[p]
Food stores	3,482	3,483	3,492	3,487	3,479	3,478	3,484	3,478	3,481	3,480	3,482	3,481	3,484	3,478	3,498
Automotive dealers and service stations	2,341	2,406	2,399	2,400	2,403	2,407	2,409	2,415	2,420	2,424	2,432	2,445	2,442	2,454	2,455
New and used car dealers	1,048	1,081	1,074	1,077	1,080	1,085	1,089	1,091	1,092	1,096	1,097	1,100	1,103	1,108	1,109
Apparel and accessory stores	1,143	1,180	1,163	1,172	1,178	1,192	1,191	1,189	1,200	1,198	1,177	1,178	1,193	1,195	1,204
Furniture and home furnishings stores	1,026	1,085	1,081	1,084	1,091	1,090	1,094	1,097	1,099	1,095	1,102	1,102	1,107	1,115	1,119
Eating and drinking places	7,760	7,904	7,863	7,880	7,911	7,989	7,960	7,932	7,925	7,943	7,986	7,987	7,980	7,981	8,061
Miscellaneous retail establishments	2,867	2,968	2,945	2,962	2,970	2,983	2,988	2,997	3,009	3,005	2,994	3,015	3,018	3,022	3,035
Finance, insurance, and real estate	7,407	7,632	7,611	7,621	7,636	7,647	7,650	7,653	7,668	7,675	7,685	7,685	7,698	7,689	7,696
Finance	3,593	3,706	3,697	3,706	3,709	3,715	3,716	3,715	3,719	3,723	3,727	3,726	3,732	3,726	3,732
Depository institutions	2,042	2,047	2,050	2,047	2,045	2,044	2,046	2,047	2,047	2,044	2,040	2,040	2,038	2,034	2,036
Commercial banks	1,468	1,465	1,467	1,465	1,463	1,462	1,464	1,466	1,464	1,460	1,458	1,458	1,457	1,456	1,455
Savings institutions	258	256	257	256	256	256	255	255	254	254	252	251	250	247	247
Nondepository institutions	658	714	716	720	721	721	719	713	711	711	713	708	708	701	699
Security and commodity brokers	645	679	668	672	676	682	685	686	691	697	702	705	712	717	725
Holding and other investment offices	248	266	263	267	267	268	266	269	270	271	272	273	274	274	272
Insurance	2,344	2,402	2,395	2,399	2,402	2,404	2,407	2,410	2,414	2,411	2,416	2,406	2,412	2,410	2,412
Insurance carriers	1,598	1,635	1,631	1,635	1,638	1,635	1,636	1,637	1,641	1,636	1,639	1,632	1,636	1,633	1,634
Insurance agents, brokers, and service	746	767	764	764	764	769	771	773	773	775	777	774	776	777	778
Real estate	1,471	1,525	1,519	1,516	1,525	1,528	1,527	1,528	1,535	1,541	1,542	1,553	1,554	1,553	1,552
Services[1]	37,526	39,000	38,697	38,782	38,952	39,055	39,205	39,257	39,433	39,554	39,657	39,804	39,822	39,980	40,101
Agricultural services	706	759	755	751	757	760	757	763	766	774	765	788	782	799	798
Hotels and other lodging places	1,776	1,799	1,791	1,786	1,797	1,807	1,813	1,811	1,806	1,812	1,807	1,800	1,805	1,822	1,835
Personal services	1,195	1,206	1,204	1,189	1,200	1,207	1,207	1,210	1,210	1,214	1,225	1,231	1,228	1,234	1,235
Business services	8,584	9,123	9,010	9,047	9,088	9,148	9,186	9,204	9,303	9,336	9,392	9,416	9,424	9,482	9,537
Services to buildings	950	988	978	979	984	992	998	1,000	1,003	1,003	1,000	999	1,003	1,008	1,004
Personnel supply services	3,230	3,405	3,350	3,366	3,387	3,422	3,418	3,440	3,490	3,501	3,513	3,505	3,523	3,556	3,613
Help supply services	2,872	3,017	2,975	2,986	3,000	3,025	3,024	3,032	3,099	3,097	3,108	3,100	3,119	3,148	3,194
Computer and data processing services	1,599	1,781	1,749	1,765	1,781	1,794	1,806	1,814	1,823	1,829	1,842	1,852	1,859	1,868	1,876
Auto repair services and parking	1,144	1,185	1,178	1,182	1,184	1,185	1,185	1,190	1,196	1,197	1,198	1,202	1,202	1,196	1,196
Miscellaneous repair services	382	397	396	398	395	395	396	398	400	400	405	403	406	407	407
Motion pictures	573	600	587	604	611	609	608	608	612	613	609	616	609	608	617
Amusement and recreation services	1,601	1,696	1,668	1,675	1,695	1,694	1,712	1,713	1,730	1,734	1,725	1,759	1,762	1,763	1,778
Health services	9,846	9,973	9,951	9,954	9,964	9,975	9,993	9,999	10,009	10,026	10,038	10,057	10,059	10,071	10,078
Offices and clinics of medical doctors	1,803	1,865	1,856	1,860	1,864	1,868	1,874	1,876	1,880	1,885	1,886	1,895	1,898	1,907	1,912
Nursing and personal care facilities	1,762	1,755	1,753	1,755	1,755	1,754	1,755	1,756	1,756	1,756	1,759	1,760	1,762	1,763	1,763
Hospitals	3,926	3,970	3,966	3,966	3,969	3,968	3,973	3,977	3,978	3,978	3,985	3,992	3,989	3,990	3,987
Home health care services	672	655	656	653	653	655	658	657	658	658	659	658	656	653	654
Legal services	973	1,002	998	999	1,002	1,000	1,004	1,007	1,009	1,012	1,015	1,017	1,014	1,014	1,010
Educational services	2,177	2,270	2,254	2,265	2,272	2,278	2,288	2,289	2,288	2,298	2,304	2,297	2,298	2,321	2,332
Social services	2,644	2,782	2,755	2,760	2,778	2,763	2,799	2,803	2,817	2,840	2,850	2,872	2,876	2,889	2,900
Child day care services	605	632	628	629	633	632	631	631	634	646	650	657	655	660	659
Residential care	747	781	772	775	777	781	785	788	792	796	801	803	807	810	816
Museums and botanical and zoological gardens	93	94	94	93	94	94	95	94	95	96	95	96	95	96	98
Membership organizations	2,361	2,402	2,392	2,394	2,409	2,403	2,409	2,408	2,409	2,411	2,418	2,420	2,420	2,422	2,420
Engineering and management services	3,185	3,420	3,370	3,391	3,411	3,441	3,458	3,464	3,487	3,496	3,515	3,532	3,544	3,558	3,561
Engineering and architectural services	905	944	939	940	942	948	948	948	954	959	964	973	976	977	980
Management and public relations	1,034	1,158	1,133	1,143	1,153	1,165	1,178	1,180	1,193	1,196	1,213	1,220	1,218	1,225	1,226
Government	19,819	20,160	20,099	20,077	20,105	20,153	20,210	20,218	20,237	20,269	20,315	20,365	20,382	20,540	20,647
Federal	2,686	2,669	2,688	2,666	2,664	2,656	2,651	2,654	2,643	2,648	2,645	2,665	2,702	2,818	2,887
Federal, except Postal Service	1,819	1,796	1,809	1,788	1,789	1,779	1,779	1,785	1,780	1,780	1,780	1,799	1,836	1,953	2,022
State	4,612	4,695	4,688	4,677	4,675	4,682	4,706	4,717	4,722	4,729	4,730	4,727	4,725	4,733	4,739
Education	1,916	1,953	1,955	1,941	1,934	1,947	1,965	1,965	1,960	1,967	1,969	1,967	1,962	1,967	1,969
Other State government	2,695	2,743	2,733	2,736	2,741	2,735	2,741	2,752	2,762	2,762	2,761	2,760	2,763	2,766	2,770
Local	12,521	12,796	12,723	12,734	12,766	12,815	12,853	12,847	12,872	12,892	12,940	12,973	12,955	12,989	13,021
Education	7,082	7,265	7,206	7,225	7,239	7,268	7,308	7,295	7,305	7,318	7,351	7,365	7,347	7,365	7,398
Other local government	5,440	5,531	5,517	5,509	5,527	5,547	5,545	5,552	5,567	5,574	5,589	5,608	5,608	5,624	5,623

[1] Includes other industries not shown separately.

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]
PRIVATE SECTOR	34.6	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.6	34.5	34.6	34.4
GOODS-PRODUCING	41.0	41.0	41.0	41.1	41.1	41.1	41.2	41.1	41.3	41.0	41.1	41.3	41.2	41.5	40.9
MINING	43.9	43.8	43.9	43.9	44.5	44.1	44.3	44.1	44.2	44.3	44.7	44.7	44.7	45.3	44.2
MANUFACTURING	41.7	41.7	41.7	41.8	41.8	41.8	41.8	41.8	41.7	41.7	41.7	41.8	41.7	42.2	41.4
Overtime hours	4.6	4.6	4.6	4.7	4.6	4.6	4.7	4.7	4.7	4.7	4.6	4.7	4.6	4.9	4.5
Durable goods	42.3	42.2	42.2	42.3	42.4	42.3	42.4	42.3	42.2	42.2	42.3	42.3	42.3	42.8	42.0
Overtime hours	4.8	4.8	4.7	4.8	4.8	4.8	4.9	4.8	4.8	4.8	4.8	4.9	4.8	5.1	4.7
Lumber and wood products	41.1	41.2	41.2	41.2	41.1	41.2	41.1	41.1	41.1	41.0	41.1	41.0	40.9	41.2	40.7
Furniture and fixtures	40.5	40.3	40.3	40.4	40.5	40.3	40.4	40.1	39.9	40.2	40.2	40.3	40.2	40.6	40.3
Stone, clay, and glass products	43.5	43.5	43.4	43.5	43.5	43.5	43.5	43.5	43.8	43.5	43.6	43.5	43.4	43.6	43.0
Primary metal industries	44.2	44.2	44.2	44.3	44.4	44.4	44.5	44.3	44.3	44.4	44.5	44.5	44.4	44.9	43.9
Blast furnaces and basic steel products	44.6	44.8	44.6	44.9	45.0	45.0	45.0	45.2	45.3	45.4	45.3	45.4	45.2	45.0	44.7
Fabricated metal products	42.3	42.2	42.1	42.2	42.3	42.3	42.3	42.2	42.1	42.1	42.4	42.4	42.5	43.0	42.2
Industrial machinery and equipment	42.8	42.2	42.1	42.1	42.3	42.3	42.4	42.3	42.2	42.2	42.3	42.3	42.3	42.9	42.1
Electronic and other electrical equipment	41.4	41.4	41.4	41.5	41.5	41.6	41.6	41.6	41.4	41.5	41.6	41.6	41.8	42.2	41.4
Transportation equipment	43.4	43.8	43.6	44.1	44.2	43.9	44.0	43.8	43.6	43.4	43.8	44.0	43.7	44.3	43.2
Motor vehicles and equipment	43.5	45.0	44.5	45.3	45.5	45.1	45.4	45.0	44.7	44.5	45.0	45.0	44.6	45.5	44.2
Instruments and related products	41.3	41.5	41.5	41.5	41.6	41.5	41.5	41.5	41.5	41.5	41.3	41.2	41.2	41.6	41.2
Miscellaneous manufacturing	39.9	39.8	40.1	39.9	39.9	40.0	39.9	39.8	39.7	39.7	39.5	39.5	39.4	39.8	39.3
Nondurable goods	40.9	40.9	41.0	41.0	41.0	41.0	41.0	41.0	41.0	40.9	40.9	41.0	40.9	41.3	40.6
Overtime hours	4.3	4.4	4.4	4.5	4.4	4.4	4.4	4.5	4.5	4.5	4.4	4.5	4.3	4.6	4.3
Food and kindred products	41.7	41.8	41.8	41.8	41.9	41.7	41.7	41.9	41.8	41.7	41.6	41.6	41.6	41.9	41.2
Textile mill products	41.0	40.9	40.9	40.7	41.1	41.0	40.9	41.2	41.3	41.2	41.1	41.7	41.6	41.9	41.0
Apparel and other textile products	37.3	37.5	37.7	37.6	37.5	37.4	37.4	37.5	37.4	37.5	37.6	37.7	37.8	38.0	37.0
Paper and allied products	43.4	43.5	43.4	43.6	43.5	43.6	43.4	43.5	43.4	43.3	43.3	43.5	43.2	43.6	42.8
Printing and publishing	38.3	38.2	38.2	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.2	38.5	38.0
Chemicals and allied products	43.2	43.0	43.0	43.0	43.1	43.2	43.2	43.0	43.0	43.0	42.9	42.7	42.6	42.9	42.7
Rubber and miscellaneous plastics products	41.7	41.7	41.8	41.8	41.7	41.7	41.8	41.5	41.5	41.5	41.6	41.6	41.5	42.1	41.3
Leather and leather products	37.6	37.8	38.2	37.9	37.9	37.9	37.5	37.6	37.7	37.4	37.8	38.1	38.0	38.9	38.2
SERVICE-PRODUCING	32.9	32.8	32.8	32.8	32.9	32.8	32.8	32.9	32.8	32.9	32.9	32.8	32.8	32.8	32.8
TRANSPORTATION AND PUBLIC UTILITIES	39.5	38.7	38.9	38.9	38.8	38.8	38.6	38.4	38.3	38.4	38.4	38.3	38.3	38.7	38.5
WHOLESALE TRADE	38.3	38.3	38.3	38.3	38.4	38.3	38.4	38.6	38.4	38.5	38.6	38.5	38.6	38.6	39.0
RETAIL TRADE	29.0	29.0	29.0	29.1	29.1	29.0	28.8	29.0	29.0	29.1	29.1	29.1	29.0	28.8	28.9

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[P]
PRIVATE SECTOR (in current dollars)	$ 12.78	$ 13.24	$13.19	$13.23	$13.27	$13.30	$13.35	$13.38	$13.41	$13.44	$13.49	$13.54	$13.58	$13.64	$13.66
Goods-producing	14.34	14.84	14.77	14.85	14.89	14.91	14.96	14.99	15.03	15.05	15.13	15.20	15.25	15.30	15.28
Mining	16.91	17.09	17.11	17.07	17.26	17.16	17.14	17.09	17.00	17.04	17.09	17.14	17.27	17.26	17.24
Construction	16.61	17.18	17.11	17.18	17.20	17.21	17.26	17.33	17.37	17.44	17.50	17.60	17.67	17.78	17.75
Manufacturing	13.49	13.91	13.85	13.93	13.98	14.01	14.04	14.06	14.07	14.10	14.15	14.21	14.23	14.28	14.26
Excluding overtime	12.79	13.18	13.13	13.19	13.24	13.27	13.29	13.31	13.33	13.36	13.41	13.45	13.47	13.49	13.52
Service-producing	12.27	12.73	12.68	12.71	12.76	12.78	12.83	12.86	12.89	12.93	12.97	13.01	13.05	13.11	13.15
Transportation and public utilities	15.31	15.69	15.66	15.67	15.72	15.73	15.79	15.79	15.84	15.94	15.92	16.00	16.04	16.12	16.20
Wholesale trade	14.07	14.58	14.52	14.56	14.61	14.65	14.70	14.75	14.76	14.83	14.90	14.89	14.90	15.03	15.04
Retail trade	8.74	9.08	9.03	9.07	9.10	9.13	9.16	9.18	9.21	9.25	9.26	9.32	9.35	9.39	9.39
Finance, insurance, and real estate	14.07	14.62	14.60	14.62	14.68	14.65	14.71	14.73	14.76	14.78	14.86	14.87	14.95	14.98	15.02
Services	12.84	13.36	13.31	13.35	13.39	13.42	13.46	13.51	13.53	13.57	13.61	13.66	13.69	13.74	13.79
PRIVATE SECTOR (in constant (1982) dollars)	7.75	7.86	7.86	7.88	7.88	7.87	7.86	7.87	7.87	7.87	7.88	7.87	7.84	7.87	7.88

[P] = preliminary.

15. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]
PRIVATE SECTOR	$12.78	$13.24	$13.20	$13.15	$13.16	$13.20	$13.38	$13.41	$13.43	$13.46	$13.58	$13.58	$13.59	$13.69	$13.64
MINING	16.91	17.09	17.05	16.98	17.17	17.05	17.13	17.05	17.01	17.19	17.30	17.20	17.28	17.29	17.18
CONSTRUCTION	16.61	17.18	17.06	17.13	17.27	17.31	17.46	17.54	17.42	17.47	17.39	17.42	17.54	17.66	17.71
MANUFACTURING	13.49	13.91	13.85	13.90	13.91	13.95	14.11	14.03	14.08	14.20	14.19	14.19	14.22	14.28	14.26
Durable goods	13.98	14.40	14.34	14.40	14.38	14.47	14.62	14.55	14.58	14.73	14.72	14.73	14.76	14.82	14.80
Lumber and wood products	11.10	11.47	11.43	11.46	11.53	11.54	11.56	11.60	11.60	11.64	11.67	11.63	11.62	11.73	11.74
Furniture and fixtures	10.90	11.23	11.14	11.16	11.25	11.28	11.33	11.33	11.36	11.47	11.47	11.51	11.59	11.64	11.69
Stone, clay, and glass products	13.59	13.87	13.84	13.91	13.97	13.94	14.10	14.00	14.04	13.97	13.94	13.96	14.03	14.23	14.26
Primary metal industries	15.48	15.83	15.74	15.90	16.02	15.98	16.18	16.01	16.12	16.17	16.20	16.28	16.34	16.51	16.39
Blast furnaces and basic steel products	18.42	18.81	18.73	18.99	19.06	18.93	18.99	18.90	19.11	19.09	19.16	19.32	19.49	19.72	19.44
Fabricated metal products	13.07	13.48	13.47	13.49	13.47	13.52	13.64	13.52	13.59	13.72	13.71	13.67	13.69	13.75	13.75
Industrial machinery and equipment	14.47	15.02	14.97	14.99	15.08	15.14	15.24	15.18	15.22	15.36	15.39	15.40	15.43	15.42	15.44
Electronic and other electrical equipment	13.10	13.46	13.39	13.42	13.49	13.52	13.64	13.60	13.61	13.73	13.77	13.72	13.70	13.70	13.66
Transportation equipment	17.51	18.04	17.92	18.14	17.88	18.17	18.50	18.41	18.39	18.72	18.57	18.58	18.70	18.82	18.79
Motor vehicles and equipment	17.84	18.41	18.33	18.61	18.16	18.53	18.96	18.85	18.80	19.22	18.99	19.03	19.17	19.36	19.34
Instruments and related products	13.81	14.17	14.11	14.13	14.25	14.28	14.29	14.36	14.34	14.41	14.38	14.41	14.40	14.40	14.44
Miscellaneous manufacturing	10.88	11.30	11.21	11.26	11.29	11.31	11.43	11.45	11.41	11.54	11.52	11.53	11.55	11.58	11.58
Nondurable goods	12.76	13.16	13.10	13.14	13.21	13.17	13.33	13.25	13.31	13.39	13.37	13.36	13.37	13.45	13.43
Food and kindred products	11.80	12.09	12.10	12.15	12.15	12.07	12.18	12.09	12.19	12.28	12.23	12.23	12.27	12.36	12.36
Tobacco products	18.56	19.07	20.47	20.69	21.09	20.86	18.90	17.82	18.02	18.03	17.21	17.48	19.10	19.71	20.19
Textile mill products	10.39	10.71	10.69	10.76	10.71	10.72	10.78	10.73	10.80	10.84	10.84	10.85	10.86	10.94	10.90
Apparel and other textile products	8.52	8.86	8.81	8.89	8.83	8.88	9.01	8.99	8.98	9.04	9.03	9.03	9.05	9.05	9.07
Paper and allied products	15.50	15.94	15.88	15.95	16.02	15.95	16.24	16.09	16.08	16.12	16.02	15.99	16.00	16.15	16.14
Printing and publishing	13.46	13.84	13.75	13.74	13.81	13.83	13.98	13.98	14.02	14.12	14.10	14.13	14.18	14.20	14.16
Chemicals and allied products	17.09	17.38	17.30	17.26	17.39	17.41	17.67	17.61	17.64	17.67	17.70	17.67	17.63	17.77	17.76
Petroleum and coal products	20.91	21.39	20.98	21.06	21.28	21.21	21.55	21.62	21.76	21.76	21.62	22.03	22.24	21.77	21.27
Rubber and miscellaneous plastics products	11.89	12.36	12.27	12.30	12.41	12.37	12.51	12.42	12.46	12.57	12.61	12.57	12.58	12.67	12.66
Leather and leather products	9.35	9.77	9.67	9.65	9.69	9.86	9.95	9.91	9.93	10.01	10.08	9.96	10.01	10.13	10.06
TRANSPORTATION AND PUBLIC UTILITIES	15.31	15.69	15.57	15.59	15.69	15.69	15.80	15.78	15.90	15.96	15.98	16.05	16.02	16.15	16.11
WHOLESALE TRADE	14.07	14.58	14.58	14.45	14.57	14.65	14.68	14.74	17.76	14.85	14.99	14.91	14.83	15.14	15.01
RETAIL TRADE	8.74	9.08	9.03	9.02	9.03	9.05	9.19	9.21	9.22	9.26	9.33	9.35	9.37	9.42	9.39
FINANCE, INSURANCE, AND REAL ESTATE	14.07	14.62	14.73	14.51	14.54	14.62	14.64	14.69	14.74	14.76	14.99	14.93	14.97	15.12	15.03
SERVICES	12.84	13.36	13.32	13.21	13.18	13.23	13.45	13.51	13.57	13.65	13.78	13.77	13.77	13.83	13.76

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[P]
PRIVATE SECTOR															
Current dollars	$442.19	$456.78	$456.72	$454.99	$456.65	$463.32	$458.93	$463.99	$463.34	$465.72	$467.15	$464.44	$464.78	$473.67	$467.85
Seasonally adjusted	–	–	455.06	456.44	457.82	458.85	460.58	461.61	462.65	463.68	465.41	468.48	468.51	471.94	469.90
Constant (1982) dollars	268.32	271.25	271.86	270.83	271.01	274.15	269.96	272.45	271.91	273.31	273.51	270.50	268.35	273.32	269.65
MINING	742.35	748.54	753.61	750.52	767.50	758.73	758.86	758.73	758.65	763.24	766.39	758.52	758.59	776.32	764.51
CONSTRUCTION	646.13	671.74	670.46	681.77	689.07	692.40	673.96	701.60	688.09	677.84	664.04	674.15	680.55	692.27	701.32
MANUFACTURING															
Current dollars	562.53	580.05	577.55	581.02	573.09	583.11	588.39	589.26	594.18	603.50	590.30	588.89	590.13	595.48	590.36
Constant (1982) dollars	341.34	344.45	343.78	345.85	340.11	345.04	346.11	346.01	348.70	354.17	345.61	342.98	340.72	343.61	340.27
Durable goods	591.35	607.68	606.58	610.56	598.21	612.08	615.50	618.38	622.57	634.86	621.18	620.13	622.87	628.37	623.08
Lumber and wood products	456.21	472.56	473.20	476.74	475.04	482.37	472.80	480.24	480.24	480.73	474.97	469.85	470.61	482.10	480.17
Furniture and fixtures	441.45	452.57	443.37	449.75	452.25	459.10	456.60	458.87	458.94	471.42	459.95	458.10	462.44	464.44	465.26
Stone, clay, and glass products	591.17	603.35	607.58	612.04	611.89	614.75	620.40	616.00	620.57	604.90	591.06	591.90	596.28	614.74	620.31
Primary metal industries	684.22	699.69	698.86	707.55	698.47	704.72	716.77	709.24	720.56	732.50	722.52	722.83	723.86	734.70	722.80
Blast furnaces and basic steel products	821.53	842.69	840.98	858.35	850.08	849.96	852.65	848.61	865.68	878.14	867.95	875.20	875.10	891.34	872.86
Fabricated metal products	552.86	568.86	567.09	571.98	560.35	571.90	571.52	574.60	580.29	594.08	579.93	576.87	577.72	583.00	580.25
Industrial machinery and equipment	619.32	633.84	631.73	631.08	628.84	637.39	635.51	640.60	646.85	663.55	654.08	652.96	654.23	655.35	651.57
Electronic and other electrical equipment	542.34	557.24	553.01	556.93	550.39	562.43	563.33	568.48	572.98	582.15	572.83	569.38	571.29	569.92	562.79
Transportation equipment	759.93	790.15	786.69	798.16	754.54	794.03	812.15	810.04	811.00	838.66	811.51	815.66	819.06	829.96	817.37
Motor vehicles and equipment	776.04	828.45	826.68	843.03	777.25	828.29	860.78	852.02	849.76	887.96	850.75	856.35	860.73	880.88	866.43
Instruments and related products	570.35	588.06	584.15	586.40	584.25	591.19	587.32	594.50	600.85	612.43	595.33	595.13	593.28	594.72	592.04
Miscellaneous manufacturing	434.11	449.74	449.52	449.27	442.57	452.40	453.77	459.15	459.82	466.22	450.43	453.13	456.23	456.25	453.94
Nondurable goods	521.88	538.24	535.79	538.74	537.65	539.97	546.53	547.23	551.03	557.02	544.16	542.42	542.82	548.76	543.92
Food and kindred products	492.06	505.36	503.36	506.66	507.87	506.94	512.62	512.62	518.08	520.67	505.10	500.21	501.84	506.76	506.76
Tobacco products	710.85	762.80	814.71	829.67	849.93	836.49	754.11	753.79	774.86	793.32	672.91	685.22	741.08	782.49	803.56
Textile mill products	425.99	438.04	437.22	442.24	434.83	440.59	438.75	445.30	449.28	453.11	443.36	448.11	450.69	456.20	446.90
Apparel and other textile products	317.80	332.25	333.02	338.71	326.71	333.00	331.57	338.92	337.65	343.52	335.92	339.53	342.09	341.19	336.50
Paper and allied products	672.70	693.39	686.02	693.83	688.86	690.64	709.69	704.74	704.30	712.50	695.27	687.57	686.40	696.07	687.56
Printing and publishing	515.52	528.69	522.50	520.75	526.16	531.07	539.63	539.63	543.98	550.68	534.39	536.94	540.26	542.44	533.83
Chemicals and allied products	738.29	747.34	740.44	742.18	742.55	750.37	765.11	758.99	765.58	772.18	757.56	750.98	749.28	757.00	754.80
Petroleum and coal products	911.68	921.91	893.75	905.58	923.55	903.55	930.96	933.98	935.68	937.86	933.98	956.10	969.66	966.59	916.74
Rubber and miscellaneous plastics products	495.81	515.41	515.34	516.60	510.05	512.12	520.42	516.67	523.32	532.97	523.32	520.40	520.81	528.34	524.12
Leather and leather products	351.56	369.31	370.36	371.53	363.38	381.58	372.13	374.60	378.33	375.75	372.96	375.49	379.38	388.99	385.30
TRANSPORTATION AND PUBLIC UTILITIES	604.75	607.20	604.21	608.01	610.34	618.19	608.30	605.95	608.97	612.86	612.03	611.51	608.76	626.62	617.01
WHOLESALE TRADE	538.88	558.41	562.79	553.44	556.57	565.49	560.78	567.49	566.78	570.24	578.61	568.07	566.51	588.95	582.39
RETAIL TRADE	253.46	263.32	262.77	265.19	270.00	270.60	264.67	266.17	264.61	271.32	265.91	266.48	267.98	272.24	271.37
FINANCE, INSURANCE, AND REAL ESTATE	512.15	529.24	536.17	522.36	527.80	540.94	528.50	530.31	530.64	534.31	551.63	538.97	537.42	554.90	539.58
SERVICES	418.58	435.54	435.56	430.65	432.30	439 24	434.44	441.78	443.74	444.99	450.61	448.90	447.53	453.62	445.82

[P] = preliminary.
NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
	Private nonfarm payrolls, 356 industries											
Over 1-month span:												
1997	57.3	59.7	62.8	63.2	57.7	57.7	61.2	60.1	61.5	65.3	62.1	61.2
1998	63.2	56.6	60.5	58.7	58.3	59.7	53.9	58.1	56.2	53.8	59.0	57.4
1999	54.1	58.8	53.9	59.6	52.8	57.9	58.8	53.8	57.3	60.7	60.8	59.0
2000	60.8	54.1	60.7	55.8	42.8	–	–	–	–	–	–	–
Over 3-month span:												
1997	62.6	64.0	66.3	66.7	63.2	62.1	61.5	66.2	67.4	69.4	69.0	69.1
1998	64.3	66.6	63.2	66.3	63.6	58.0	57.4	57.9	59.7	58.1	58.6	59.4
1999	58.3	57.3	58.4	54.4	57.3	58.8	58.1	60.7	59.6	63.5	64.3	63.1
2000	61.0	62.6	61.7	56.0	–	–	–	–	–	–	–	–
Over 6-month span:												
1997	66.3	67.0	66.6	66.3	65.6	67.1	66.3	68.5	69.0	70.4	69.7	70.4
1998	69.8	67.4	65.2	61.8	62.9	61.4	59.0	58.4	57.4	59.7	59.3	59.1
1999	60.0	58.0	57.6	58.6	54.4	59.7	60.4	62.1	64.0	62.8	65.2	64.6
2000	65.4	62.1	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1997	69.0	67.3	68.3	69.7	69.5	70.1	70.1	70.4	70.5	70.1	69.4	70.4
1998	69.7	67.3	67.3	65.9	63.9	62.5	61.5	62.1	61.0	59.8	59.8	58.1
1999	60.3	58.3	57.6	59.4	59.6	60.5	61.9	61.0	62.6	62.4	62.8	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1997	49.6	52.5	56.1	54.0	51.4	54.3	50.7	53.6	56.5	61.9	60.4	55.4
1998	57.9	50.7	53.6	50.7	47.1	50.0	37.8	50.0	45.7	39.9	41.7	43.9
1999	45.0	41.0	42.8	46.4	40.3	46.4	54.7	38.1	46.4	51.8	51.4	50.4
2000	52.2	47.8	51.1	50.0	42.4	–	–	–	–	–	–	–
Over 3-month span:												
1997	50.7	53.2	55.8	56.1	53.2	52.5	52.5	55.8	59.7	66.5	64.7	64.0
1998	56.8	56.8	52.2	52.2	48.6	41.4	39.2	40.3	43.2	37.1	36.7	40.6
1999	36.7	37.1	37.1	34.5	37.8	43.5	39.9	45.0	42.1	50.4	51.1	50.7
2000	47.8	52.5	49.3	45.3	–	–	–	–	–	–	–	–
Over 6-month span:												
1997	53.2	53.2	52.5	52.9	51.8	53.2	54.7	61.2	61.2	64.4	64.7	63.7
1998	60.1	54.3	50.4	39.9	43.5	42.1	38.8	36.7	36.0	39.9	34.5	32.7
1999	35.6	33.5	33.5	37.1	32.7	38.8	41.0	45.7	48.2	43.2	48.6	51.1
2000	51.1	46.4	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1997	54.7	52.5	54.0	54.0	55.4	56.8	57.2	57.9	58.3	56.8	56.8	57.2
1998	55.0	51.8	51.8	46.8	40.6	39.9	37.8	38.1	37.1	36.0	34.2	33.5
1999	37.4	32.4	31.7	35.3	36.0	37.1	38.8	39.6	42.4	41.7	43.2	–

– Data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1991	1992	1993	1994	1995	1996	1997	1998	1999
Civilian noninstitutional population	190,925	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753
Civilian labor force	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368
Labor force participation rate	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1
Employed	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488
Employment-population ratio	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3
Agriculture	3,269	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281
Nonagricultural industries	114,499	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207
Unemployed	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880
Unemployment rate	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2
Not in the labor force	64,578	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385

19. Annual data: Employment levels by industry

[In thousands]

Industry	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total employment	108,249	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,786
Private sector	89,847	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,616
Goods-producing	23,745	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,482
Mining	689	635	610	601	581	580	596	590	535
Construction	4,650	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,404
Manufacturing	18,406	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,543
Service-producing	84,504	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,304
Transportation and public utilities	5,755	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,826
Wholesale trade	6,081	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,924
Retail trade	19,284	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,788
Finance, insurance, and real estate	6,646	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,569
Services	28,336	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,027
Government	18,402	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,170
Federal	2,966	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669
State	4,355	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,695
Local	11,081	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,806

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

20. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1991	1992	1993	1994	1995	1996	1997	1998	1999
Private sector:									
Average weekly hours	34.3	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5
Average hourly earnings (in dollars)	10.32	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24
Average weekly earnings (in dollars)	353.98	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78
Mining:									
Average weekly hours	44.4	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.8
Average hourly earnings (in dollars)	14.19	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.09
Average weekly earnings (in dollars)	630.04	638.31	646.78	666.62	683.91	707.59	733.21	742.35	748.54
Construction:									
Average weekly hours	38.1	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1
Average hourly earnings (in dollars)	14.00	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.18
Average weekly earnings (in dollars)	533.40	537.70	553.63	573.00	587.00	603.33	625.56	646.13	671.74
Manufacturing:									
Average weekly hours	40.7	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7
Average hourly earnings (in dollars)	11.18	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.91
Average weekly earnings (in dollars)	455.03	469.86	486.04	506.94	514.59	531.23	553.14	562.53	580.05
Transportation and public utilities:									
Average weekly hours	38.1	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7
Average hourly earnings (in dollars)	13.20	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69
Average weekly earnings (in dollars)	502.92	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20
Wholesale trade:									
Average weekly hours	38.1	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3
Average hourly earnings (in dollars)	11.15	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58
Average weekly earnings (in dollars)	424.82	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.41
Retail trade:									
Average weekly hours	28.6	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0
Average hourly earnings (in dollars)	6.94	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.08
Average weekly earnings (in dollars)	198.48	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.32
Finance, insurance, and real estate:									
Average weekly hours	35.7	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2
Average hourly earnings (in dollars)	10.39	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62
Average weekly earnings (in dollars)	370.92	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24
Services:									
Average weekly hours	32.4	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6
Average hourly earnings (in dollars)	10.23	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.36
Average weekly earnings (in dollars)	331.45	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.54

21. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
Civilian workers[2]	136.3	137.4	139.0	139.8	140.4	141.8	143.3	144.6	146.5	1.3	4.3
Workers, by occupational group:											
White-collar workers	137.7	138.7	140.6	141.4	141.9	143.3	145.0	146.3	148.4	1.4	4.6
Professional specialty and technical	137.5	138.3	140.0	141.0	141.3	142.2	143.9	145.3	146.7	1.0	3.8
Executive, adminitrative, and managerial	139.1	139.7	141.7	141.8	143.5	145.4	147.3	148.6	150.5	1.3	4.9
Administrative support, including clerical	138.0	139.3	140.4	141.3	142.5	143.4	144.7	146.1	148.6	1.7	4.3
Blue-collar workers	133.2	134.3	135.3	136.1	137.1	138.3	139.5	140.6	142.7	1.5	4.1
Service occupations	136.9	137.9	139.4	140.0	141.3	142.4	143.1	144.8	146.0	.8	3.3
Workers, by industry division:											
Goods-producing	135.1	136.3	137.2	137.9	139.0	140.0	141.2	142.5	144.9	1.7	4.2
Manufacturing	136.4	137.2	138.2	138.9	139.9	140.9	142.1	143.6	146.0	1.7	4.4
Service-producing	136.8	137.7	139.6	140.4	140.9	142.4	144.0	145.3	147.1	1.2	4.4
Services	138.3	139.0	140.8	141.7	142.3	143.2	145.1	146.5	148.0	1.0	4.0
Health services	138.0	138.5	139.1	139.1	140.5	141.4	142.7	144.3	145.9	1.1	3.8
Hospitals	137.1	138.2	139.4	140.2	141.3	142.2	143.4	145.0	146.3	.9	3.5
Educational services	137.5	137.7	140.2	141.0	141.3	141.7	144.6	145.8	146.5	.5	3.7
Public administration[3]	136.4	137.4	138.9	139.9	140.8	141.5	142.4	144.4	145.7	.9	3.5
Nonmanufacturing	136.2	137.3	139.0	139.9	140.5	141.9	143.4	144.7	146.6	1.3	4.3
Private industry workers	136.3	137.5	139.0	139.8	140.4	142.0	143.3	144.6	146.8	1.5	4.6
Excluding sales occupations	136.4	137.5	138.8	139.4	140.5	141.9	143.2	144.5	146.5	1.4	4.3
Workers, by occupational group:											
White-collar workers	138.1	139.4	141.1	142.0	142.4	144.1	145.6	146.9	149.3	1.6	4.8
Excluding sales occupations	138.8	139.9	141.3	141.9	143.0	144.5	146.0	147.3	149.4	1.4	4.5
Professional specialty and technical occupations	138.8	140.1	141.6	142.6	142.9	144.1	145.2	146.7	148.4	1.2	3.8
Executive, adminitrative, and managerial occupations	139.4	140.0	141.9	141.8	143.7	145.8	147.7	149.1	151.1	1.3	5.1
Sales occupations	135.3	137.3	140.4	142.6	139.6	142.6	144.1	145.3	148.9	2.5	6.7
Administrative support occupations, including clerical	138.2	139.6	140.6	141.4	142.6	143.7	145.0	146.2	149.0	1.9	4.5
Blue-collar workers	133.1	134.3	135.2	135.9	136.9	138.2	139.4	140.5	142.6	1.5	4.2
Precision production, craft, and repair occupations	132.9	134.4	135.4	136.1	137.2	138.4	139.6	140.6	142.3	1.2	3.7
Machine operators, assemblers, and inspectors	133.6	134.7	135.7	136.8	137.3	138.4	139.9	141.4	144.0	1.8	4.9
Transportation and material moving occupations	129.3	129.9	130.7	130.7	131.6	133.6	134.4	135.2	137.5	1.7	4.5
Handlers, equipment cleaners, helpers, and laborers	137.0	137.6	138.5	139.2	141.0	142.3	143.2	144.4	146.4	1.4	3.8
Service occupations	135.3	136.0	137.3	138.0	139.5	140.6	141.0	142.6	143.9	.9	3.2
Production and nonsupervisory occupations[4]	135.3	136.6	138.0	139.0	139.3	140.8	141.9	143.1	145.3	1.5	4.3
Workers, by industry division:											
Goods-producing	135.1	136.2	137.1	137.8	138.9	139.9	141.1	142.5	144.8	1.6	4.2
Excluding sales occupations	134.5	135.6	136.5	137.2	138.3	139.3	140.5	141.8	144.2	1.7	4.3
White-collar occupations	137.7	138.8	139.7	140.2	141.7	142.7	143.9	145.5	148.1	1.8	4.5
Excluding sales occupations	136.3	137.4	138.3	138.8	140.4	141.3	142.5	143.9	146.5	1.8	4.4
Blue-collar occupations	133.5	134.6	135.5	136.3	137.1	138.3	139.4	140.7	142.8	1.5	4.2
Construction	130.6	132.7	133.4	134.3	135.6	136.9	137.9	138.7	140.8	1.5	3.8
Manufacturing	136.4	137.2	138.2	138.9	139.9	140.9	142.1	143.6	146.0	1.7	4.4
White-collar occupations	138.2	139.1	140.1	140.5	141.8	143.0	144.3	145.8	148.2	1.6	4.5
Excluding sales occupations	136.5	137.3	138.3	138.7	140.1	141.3	142.5	143.8	146.2	1.7	4.4
Blue-collar occupations	135.0	135.9	136.8	137.7	138.5	139.4	140.5	142.1	144.4	1.6	4.3
Durables	136.5	137.4	138.5	139.2	139.9	141.0	142.3	144.0	146.5	1.7	4.7
Nondurables	135.9	136.7	137.6	138.2	139.6	140.4	141.5	142.8	144.9	1.5	3.8
Service-producing	136.7	137.8	139.6	140.5	140.9	142.8	144.1	145.3	147.4	1.4	4.6
Excluding sales occupations	137.4	138.5	140.0	140.6	141.7	143.3	144.6	145.9	147.7	1.2	4.2
White-collar occupations	138.0	139.3	141.2	142.2	142.3	144.3	145.8	147.0	149.3	1.6	4.9
Excluding sales occupations	139.5	140.6	142.2	142.8	143.8	145.5	147.0	148.3	150.3	1.3	4.5
Blue-collar occupations	132.1	133.2	134.3	134.8	136.2	137.8	139.1	139.8	141.8	1.4	4.1
Service occupations	135.0	135.8	137.0	137.8	139.3	140.5	140.8	142.4	143.6	.8	3.1
Transportation and public utilities	135.8	137.1	138.5	139.3	139.7	140.9	141.8	142.3	143.9	1.1	3.0
Transportation	134.0	134.9	136.7	137.3	136.8	138.1	138.7	139.5	140.4	.6	2.6
Public utilities	137.9	139.7	140.7	141.9	143.4	144.6	145.7	146.1	148.6	1.7	3.6
Communications	136.6	139.2	140.5	141.7	143.3	144.9	146.1	146.0	148.4	1.6	3.6
Electric, gas, and sanitary services	139.6	140.3	141.0	142.1	143.4	144.2	145.1	146.1	148.9	1.9	3.8
Wholesale and retail trade	134.7	135.8	137.6	138.2	138.9	141.1	142.2	143.5	145.6	1.5	4.8
Excluding sales occupations	135.5	136.3	138.1	138.8	139.9	141.9	142.8	144.3	146.4	1.5	4.6
Wholesale trade	137.7	138.6	140.8	142.8	142.7	144.6	146.3	148.5	150.0	1.0	5.1
Excluding sales occupations	137.0	138.2	140.0	141.2	142.4	144.0	145.8	147.4	149.6	1.5	5.1
Retail trade	133.1	134.4	135.9	135.6	136.8	139.1	140.0	140.7	143.2	1.8	4.7
General merchandise stores	131.2	133.0	133.2	134.0	135.0	135.6	137.2	138.3	139.7	1.0	3.5
Food stores	131.3	132.9	133.7	132.7	134.3	135.7	137.0	138.1	140.1	1.4	4.3

See footnotes at end of table.

21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
Finance, insurance, and real estate	136.7	138.4	141.0	142.5	141.5	145.8	147.6	148.3	152.0	2.5	7.4
Excluding sales occupations	140.2	141.3	143.2	143.3	145.6	148.8	151.0	151.6	154.2	1.7	5.9
Banking, savings and loan, and other credit agencies	143.3	145.3	148.4	146.7	148.8	155.4	159.3	159.8	162.7	1.8	9.3
Insurance	137.4	138.9	141.9	141.7	141.7	144.0	144.5	145.8	149.9	2.8	5.8
Services	139.3	140.3	141.8	142.7	143.5	144.6	146.1	147.6	149.4	1.2	4.1
Business services	139.5	140.7	143.5	145.9	147.5	148.7	150.7	151.9	154.2	1.5	4.5
Health services	138.2	138.7	139.0	139.0	140.5	141.4	142.6	144.2	145.8	1.1	3.8
Hospitals	136.7	138.2	139.1	139.9	141.2	142.1	143.0	144.6	145.8	.8	3.3
Educational services	143.4	143.9	147.0	147.7	148.3	148.7	152.2	153.0	154.0	.7	3.8
Colleges and universities	144.3	144.8	147.8	148.5	149.2	149.6	152.6	153.3	154.6	.8	3.6
Nonmanufacturing	136.0	137.2	138.9	139.7	140.3	142.0	143.4	144.5	146.7	1.5	4.6
White-collar workers	137.9	139.2	141.1	142.0	142.3	144.1	145.6	146.9	149.2	1.6	4.8
Excluding sales occupations	139.3	140.5	142.0	142.7	143.7	145.3	146.8	148.1	150.2	1.4	4.5
Blue-collar occupations	131.0	132.4	133.4	134.0	135.2	136.8	138.0	138.7	140.6	1.4	4.0
Service occupations	134.9	135.7	136.9	137.7	139.2	140.4	140.7	142.3	143.5	.8	3.1
State and local government workers	136.5	136.9	139.0	139.8	140.5	141.0	143.1	144.6	145.5	.6	3.6
Workers, by occupational group:											
White-collar workers	136.1	136.2	138.4	139.3	139.8	140.2	142.6	144.0	144.9	.6	3.6
Professional specialty and technical	135.6	135.6	137.7	138.5	138.8	139.3	142.0	143.2	144.1	.6	3.8
Executive, administrative, and managerial	137.5	137.9	140.4	141.6	142.6	142.8	144.5	146.1	147.0	.6	3.1
Administrative support, including clerical	136.9	137.2	139.5	140.3	141.4	141.3	143.0	145.0	145.9	.6	3.2
Blue-collar workers	135.0	135.2	136.8	137.8	138.8	139.5	140.9	142.5	143.7	.8	3.5
Workers, by industry division:											
Services	136.5	136.6	139.0	139.7	140.0	140.5	143.2	144.5	145.2	.5	3.7
Services excluding schools[5]	136.1	136.2	138.7	138.8	139.6	140.3	142.6	143.8	145.2	1.0	4.0
Health services	137.9	138.0	140.3	140.7	141.2	142.0	144.2	145.8	147.3	1.0	4.3
Hospitals	138.4	138.4	140.7	141.2	141.7	142.7	144.8	146.3	147.9	1.1	4.4
Educational services	136.3	136.5	138.8	139.6	139.9	140.3	143.1	144.4	145.0	.4	3.6
Schools	136.6	136.7	139.1	139.9	140.2	140.6	143.5	144.7	145.3	.4	3.6
Elementary and secondary	136.1	136.2	138.8	139.3	139.6	140.0	142.9	144.1	144.5	.3	3.5
Colleges and universities	137.9	138.1	140.4	141.5	141.7	142.1	144.8	146.5	147.4	.6	4.0
Public administration[3]	136.4	137.4	138.9	139.9	140.8	141.5	142.4	144.4	145.7	.9	3.5

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

22. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
Civilian workers[1]	134.0	135.0	136.8	137.7	138.4	139.8	141.3	142.5	144.0	1.1	4.0
Workers, by occupational group:											
White-collar workers	135.6	136.7	138.8	139.7	140.1	141.6	143.3	144.6	146.2	1.1	4.4
Professional specialty and technical	135.8	136.6	138.5	139.4	140.1	141.0	142.6	144.0	144.9	.6	3.4
Executive, administrative, and managerial	137.4	138.3	140.5	140.3	141.6	143.8	145.9	147.2	148.6	1.0	4.9
Administrative support, including clerical	135.0	136.2	137.5	138.6	140.0	140.9	142.3	143.5	145.5	1.4	3.9
Blue-collar workers	130.4	131.4	132.6	133.3	134.5	135.8	137.0	137.9	139.2	.9	3.5
Service occupations	133.7	134.5	136.1	137.0	138.3	139.4	140.1	141.7	143.0	.9	3.4
Workers, by industry division:											
Goods-producing	132.0	133.3	134.4	135.2	136.3	137.4	138.6	139.7	141.3	1.1	3.7
Manufacturing	133.7	134.6	136.0	136.8	137.9	139.0	140.2	141.5	142.9	1.0	3.6
Service-producing	134.8	135.7	137.8	138.7	139.2	140.7	142.3	143.5	145.0	1.0	4.2
Services	136.9	137.6	139.6	140.5	141.5	142.3	144.1	145.5	146.6	.8	3.6
Health services	136.2	136.5	137.6	137.6	138.8	139.7	140.9	142.5	143.8	.9	3.6
Hospitals	134.2	135.1	136.4	137.1	138.1	138.8	140.1	141.6	142.6	.7	3.3
Educational services	136.3	136.5	139.1	140.0	140.2	140.6	143.7	144.7	145.3	.4	3.6
Public administration[2]	132.7	133.2	134.8	135.9	136.9	137.8	139.5	141.5	142.5	.7	4.1
Nonmanufacturing	134.0	135.1	137.0	137.8	138.4	139.9	141.5	142.6	144.2	1.1	4.2
Private industry workers	133.7	134.9	136.6	137.4	138.1	139.7	141.0	142.2	143.9	1.2	4.2
Excluding sales occupations	133.7	134.8	136.3	136.9	138.2	139.6	140.8	142.0	143.5	1.1	3.8
Workers, by occupational group:											
White-collar workers	135.7	137.0	139.0	139.9	140.3	142.1	143.5	144.8	146.6	1.2	4.5
Excluding sales occupations	136.3	137.5	139.1	139.7	141.0	142.5	143.9	145.2	146.7	1.0	4.0
Professional specialty and technical occupations	135.9	137.1	138.7	139.7	140.7	141.8	142.6	144.1	145.1	.7	3.1
Executive, administrative, and managerial occupations	137.8	138.7	140.9	140.5	141.9	144.3	146.4	147.6	149.2	1.1	5.1
Sales occupations	133.1	135.2	138.8	141.3	137.3	140.5	142.1	143.3	146.7	2.4	6.8
Administrative support occupations, including clerical	135.3	136.7	137.9	138.9	140.4	141.4	142.7	143.8	146.0	1.5	4.0
Blue-collar workers	130.2	131.3	132.4	133.2	134.3	135.6	136.8	137.7	139.1	1.0	3.6
Precision production, craft, and repair occupations	129.8	131.2	132.3	133.0	134.3	135.6	136.7	137.5	138.9	1.0	3.4
Machine operators, assemblers, and inspectors	131.6	132.7	133.8	134.9	135.7	136.7	138.3	139.5	140.7	.9	3.7
Transportation and material moving occupations	125.9	126.4	127.6	127.8	129.1	131.0	131.9	132.7	134.1	1.1	3.9
Handlers, equipment cleaners, helpers, and laborers	133.2	133.7	135.1	135.8	137.3	138.3	139.4	140.4	141.8	1.0	3.3
Service occupations	132.1	133.0	134.4	135.3	136.7	137.8	138.0	139.6	141.0	1.0	3.1
Production and nonsupervisory occupations[3]	132.3	133.6	135.2	136.4	136.8	138.2	139.3	140.4	142.1	1.2	3.9
Workers, by industry division:											
Goods-producing	132.0	133.2	134.3	135.2	136.3	137.3	138.5	139.7	141.3	1.1	3.7
Excluding sales occupations	131.3	132.5	133.6	134.4	135.5	136.6	137.8	138.9	140.5	1.2	3.7
White-collar occupations	135.0	136.3	137.4	138.2	139.4	140.5	141.7	143.0	145.0	1.4	4.0
Excluding sales occupations	133.3	134.6	135.7	136.4	137.8	138.8	140.1	141.3	143.2	1.3	3.9
Blue-collar occupations	130.1	131.3	132.3	133.3	134.3	135.4	136.6	137.6	139.0	1.0	3.5
Construction	126.0	128.1	128.5	129.3	130.7	131.9	133.0	133.6	136.0	1.8	4.1
Manufacturing	133.7	134.6	136.0	136.8	137.9	139.0	140.2	141.5	142.9	1.0	3.6
White-collar occupations	135.6	136.8	138.3	139.0	140.1	141.4	142.7	144.0	145.8	1.3	4.1
Excluding sales occupations	133.8	135.0	136.3	137.1	138.3	139.6	140.8	142.0	143.7	1.2	3.9
Blue-collar occupations	132.3	133.1	134.3	135.3	136.3	137.2	138.4	139.7	140.8	.8	3.3
Durables	133.4	134.5	135.9	136.9	137.9	139.1	140.4	141.8	143.0	.8	3.7
Nondurables	134.2	134.9	136.0	136.8	138.0	138.7	139.7	140.9	142.7	1.3	3.4
Service-producing	134.4	135.6	137.6	138.4	138.9	140.8	142.1	143.3	145.0	1.2	4.4
Excluding sales occupations	135.2	136.2	137.9	138.5	139.8	141.4	142.6	143.8	145.3	1.0	3.9
White-collar occupations	135.7	137.0	139.2	140.1	140.3	142.3	143.8	145.0	146.9	1.3	4.7
Excluding sales occupations	137.3	138.4	140.2	140.7	142.0	143.7	145.1	146.4	147.8	1.0	4.1
Blue-collar occupations	130.2	131.1	132.4	132.9	134.4	135.9	137.0	137.8	139.1	.9	3.5
Service occupations	132.1	133.0	134.2	135.2	136.7	137.8	138.0	139.6	141.1	1.1	3.2
Transportation and public utilities	132.1	132.8	134.3	135.1	135.4	136.8	137.5	137.9	138.5	.4	2.3
Transportation	130.1	130.4	132.4	132.9	132.3	133.7	134.4	134.9	134.9	.0	2.0
Public utilities	134.5	135.7	136.5	137.8	139.2	140.6	141.5	141.8	143.2	1.0	2.9
Communications	134.4	135.8	136.7	138.0	139.4	141.1	141.9	142.2	143.4	.8	2.9
Electric, gas, and sanitary services	134.7	135.6	136.3	137.4	138.9	140.0	140.9	141.3	143.0	1.2	3.0
Wholesale and retail trade	133.3	134.6	136.6	137.0	137.7	139.6	140.7	142.0	143.8	1.3	4.4
Excluding sales occupations	134.7	135.6	137.6	138.2	139.5	141.1	141.8	143.3	145.2	1.3	4.1
Wholesale trade	136.2	137.1	139.3	141.3	140.7	142.3	144.3	146.5	147.4	.6	4.8
Excluding sales occupations	136.5	137.8	139.6	140.8	141.9	143.0	144.8	146.4	147.9	1.0	4.2
Retail trade	131.9	133.3	135.2	134.8	136.2	138.3	138.9	139.6	142.1	1.8	4.3
General merchandise stores	129.4	131.5	132.2	133.0	133.7	134.3	135.6	136.7	137.8	.8	3.1
Food stores	129.0	130.5	131.7	130.5	131.8	132.8	133.9	134.9	136.7	1.3	3.7

See footnotes at end of table.

22. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
Finance, insurance, and real estate	132.6	134.8	138.1	139.8	137.2	142.4	144.5	145.2	148.7	2.4	8.4
Excluding sales occupations	135.9	137.5	139.7	139.6	141.0	144.8	147.5	148.0	150.2	1.5	6.5
Banking, savings and loan, and other credit agencies	140.9	143.2	147.0	144.4	146.1	154.5	159.2	159.6	162.0	1.5	10.9
Insurance	133.1	134.8	138.7	138.5	137.4	139.8	140.2	141.5	145.5	2.8	5.9
Services	137.2	138.3	140.0	140.8	142.2	143.2	144.5	146.0	147.4	1.0	3.7
Business services	137.6	139.2	141.8	144.1	145.4	146.3	148.5	149.8	152.0	1.5	4.5
Health services	136.2	136.5	137.5	137.4	138.7	139.6	140.6	142.2	143.5	.9	3.5
Hospitals	133.6	134.7	135.8	136.5	137.6	138.3	139.3	140.9	141.8	.6	3.1
Educational services	139.1	139.6	142.8	143.5	143.9	144.2	147.5	148.2	148.9	.5	3.5
Colleges and universities	139.1	139.7	142.8	143.6	144.1	144.4	147.2	147.9	148.9	.7	3.3
Nonmanufacturing	133.4	134.7	136.5	137.4	137.9	139.7	141.0	142.1	143.9	1.3	4.4
White-collar workers	135.5	136.8	138.9	139.8	140.1	142.0	143.5	144.7	146.5	1.2	4.6
Excluding sales occupations	136.9	138.1	139.8	140.3	141.6	143.2	144.6	145.9	147.4	1.0	4.1
Blue-collar occupations	128.2	129.5	130.5	131.1	132.4	134.0	135.1	135.8	137.4	1.2	3.8
Service occupations	132.0	132.9	134.1	135.1	136.5	137.7	137.9	139.5	140.9	1.0	3.2
State and local government workers	135.1	135.4	137.6	138.5	139.0	139.6	142.2	143.5	144.3	.6	3.8
Workers, by occupational group:											
White-collar workers	135.0	135.2	137.6	138.5	138.9	139.3	142.1	143.4	144.1	.5	3.7
Professional specialty and technical	135.5	135.6	137.9	138.7	138.9	139.4	142.5	143.6	144.3	.5	3.9
Executive, administrative, and managerial	135.1	135.6	138.0	139.3	140.1	140.5	142.7	144.3	144.9	.4	3.4
Administrative support, including clerical	133.0	133.3	135.4	136.5	137.4	137.5	139.6	141.7	142.4	.5	3.6
Blue-collar workers	133.1	133.5	135.1	136.0	136.9	137.6	139.4	140.7	141.5	.6	3.4
Workers, by industry division:											
Services	135.7	135.9	138.4	139.2	139.5	139.9	142.9	144.0	144.6	.4	3.7
Services excluding schools[4]	135.4	135.5	137.8	138.2	139.0	139.6	142.1	143.2	144.3	.8	3.8
Health services	136.3	136.5	138.7	139.2	139.7	140.4	142.8	144.2	145.3	.8	4.0
Hospitals	136.3	136.5	138.6	139.1	139.7	140.6	142.8	144.1	145.3	.8	4.0
Educational services	135.7	135.8	138.4	139.3	139.5	139.8	142.9	144.0	144.5	.3	3.6
Schools	135.8	136.0	138.5	139.5	139.6	140.0	143.1	144.2	144.7	.3	3.7
Elementary and secondary	136.0	136.1	138.7	139.3	139.5	139.9	143.1	144.1	144.5	.3	3.6
Colleges and universities	135.2	135.5	137.7	139.6	139.6	139.8	142.6	144.4	144.9	.3	3.8
Public administration[2]	132.7	133.2	134.8	135.9	136.9	137.8	139.5	141.5	142.5	.7	4.1

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

23. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
Private industry workers	142.6	143.7	144.5	145.2	145.8	147.3	148.6	150.2	153.8	2.4	5.5
Workers, by occupational group:											
White-collar workers	144.7	145.6	146.6	147.4	147.9	149.4	151.0	152.5	156.3	2.5	5.7
Blue-collar workers	139.1	140.4	141.0	141.6	142.2	143.6	144.8	146.2	150.0	2.6	5.5
Workers, by industry division:											
Goods-producing	141.5	142.5	143.0	143.2	144.3	145.2	146.3	148.2	152.3	2.8	5.6
Service-producing	142.7	143.8	144.9	145.7	146.1	147.9	149.4	150.7	154.0	2.2	5.4
Manufacturing	141.7	142.4	142.6	142.7	143.6	144.5	145.7	147.8	152.3	3.0	6.1
Nonmanufacturing	142.7	143.9	145.0	145.8	146.3	148.0	149.4	150.7	154.0	2.2	5.3

24. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	1998				1999				2000	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2000	
COMPENSATION											
Workers, by bargaining status[1]											
Union	134.0	135.3	136.8	137.5	138.0	139.0	140.2	141.2	143.0	1.3	3.6
Goods-producing	132.7	134.3	135.6	136.5	136.8	138.2	139.2	140.8	143.3	1.8	4.8
Service-producing	135.3	136.2	138.0	138.5	139.2	139.7	141.0	141.4	142.5	.8	2.4
Manufacturing	133.6	134.6	136.0	136.9	137.0	138.1	139.1	141.0	144.5	2.5	5.5
Nonmanufacturing	133.9	135.3	136.9	137.4	138.1	139.2	140.3	140.8	141.7	.6	2.6
Nonunion	136.7	137.8	139.3	140.1	140.8	142.5	143.8	145.2	147.4	1.5	4.7
Goods-producing	135.9	136.9	137.7	138.3	139.7	140.5	141.8	143.1	145.4	1.6	4.1
Service-producing	136.7	138.0	139.7	140.6	141.1	143.0	144.4	145.7	148.0	1.6	4.9
Manufacturing	137.2	138.0	138.9	139.4	140.7	141.7	143.0	144.4	146.5	1.5	4.1
Nonmanufacturing	136.3	137.5	139.1	140.0	140.6	142.4	143.8	145.1	147.4	1.6	4.8
Workers, by region[1]											
Northeast	136.0	137.0	138.7	139.5	140.5	141.5	143.2	144.3	146.3	1.4	4.1
South	135.5	136.4	137.6	138.1	139.1	140.7	141.8	143.0	145.0	1.4	4.2
Midwest (formerly North Central)	138.3	139.6	140.9	141.4	141.7	143.6	145.0	146.3	148.9	1.8	5.1
West	135.2	136.6	138.5	140.0	140.3	142.1	143.3	144.7	147.0	1.6	4.8
Workers, by area size[1]											
Metropolitan areas	136.4	137.5	139.1	139.8	140.4	142.0	143.3	144.7	146.9	1.5	4.6
Other areas	135.9	137.1	138.2	139.4	140.5	141.8	143.1	143.6	146.0	1.7	3.9
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	129.6	130.7	132.4	133.1	133.6	134.7	135.7	136.5	137.2	.5	2.7
Goods-producing	127.9	129.4	131.0	131.7	132.3	133.8	134.9	136.1	137.2	.8	3.7
Service-producing	131.8	132.2	134.1	134.8	135.4	135.8	136.8	137.2	137.6	.3	1.6
Manufacturing	129.6	130.4	132.2	133.0	133.6	134.7	135.8	137.5	138.8	.9	3.9
Nonmanufacturing	129.6	130.8	132.4	133.1	133.7	134.6	135.6	135.9	136.4	.4	2.0
Nonunion	134.5	135.7	137.4	138.3	139.0	140.7	142.0	143.3	145.1	1.3	4.4
Goods-producing	133.6	134.7	135.7	136.5	137.8	138.8	140.0	141.1	142.9	1.3	3.7
Service-producing	134.6	135.9	137.9	138.8	139.3	141.3	142.6	143.9	145.8	1.3	4.7
Manufacturing	135.1	136.2	137.3	138.2	139.4	140.5	141.7	142.9	144.4	1.0	3.6
Nonmanufacturing	134.0	135.3	137.1	138.0	138.6	140.5	141.8	143.0	145.0	1.4	4.6
Workers, by region[1]											
Northeast	132.6	133.8	135.4	136.4	137.1	138.2	139.9	140.9	142.3	1.0	3.8
South	134.0	134.9	136.5	136.7	137.9	139.4	140.2	141.5	143.0	1.1	3.7
Midwest (formerly North Central)	134.7	136.0	137.5	138.0	138.9	141.0	142.4	143.6	145.3	1.2	4.6
West	132.9	134.5	136.7	138.4	138.2	140.2	141.3	142.6	144.7	1.5	4.7
Workers, by area size[1]											
Metropolitan areas	133.8	135.1	136.9	137.7	138.3	139.9	141.2	142.5	144.1	1.1	4.2
Other areas	132.5	133.4	134.7	136.0	137.1	138.4	139.8	140.2	142.2	1.4	3.7

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

25. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's)	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time	10	9	9	10	11	10	8	9	–	–
Average minutes per day	–	25	26	27	29	26	30	29	–	–
Paid rest time	75	76	73	72	72	71	67	68	–	–
Average minutes per day	–	25	26	26	26	26	28	26	–	–
Paid funeral leave	–	–	–	88	85	84	80	83	80	81
Average days per occurrence	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays	99	99	99	99	96	97	92	91	89	89
Average days per year	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave	20	24	23	25	24	22	21	21	22	20
Average days per year	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	–	–	–	–	–	–	–	84	93
Insurance plans										
	97	97	97	95	90	92	83	82	77	76
	–	–	46	66	76	75	81	86	78	85
	58	62	62	70	79	80	80	82	73	78
	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage	26	27	36	43	44	47	51	61	67	69
Average monthly contribution	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage	46	51	58	63	64	66	69	76	78	80
Average monthly contribution	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance	69	72	74	72	78	71	71	76	77	74
Survivor income benefits	–	–	–	10	8	7	6	5	7	6
Retiree protection available	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans	54	51	51	49	46	43	45	44		–
Participants in short-term disability plans [1]	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans	84	84	82	76	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65	55	58	63	64	59	62	55	52	52	52
Early retirement available	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans	–	–	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]	–	–	–	5	12	23	36	52	38	32
Premium conversion plans	–	–	–	–	–	–	–	–	5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

26. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	1992	1994	1996	1987	1990	1992	1994
Scope of survey (in 000's)	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time	8	9	–	–	17	11	10	–
Average minutes per day	37	37	–	–	34	36	34	–
Paid rest time	48	49	–	–	58	56	53	–
Average minutes per day	27	26	–	–	29	29	29	–
Paid funeral leave	47	50	50	51	56	63	65	62
Average days per occurrence	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays	84	82	82	80	81	74	75	73
Average days per year[1]	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave	11	12	13	14	38	39	38	38
Average days per year	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations	88	88	88	86	72	67	67	66
Paid sick leave [2]	47	53	50	50	97	95	95	94
Unpaid leave	17	18	–	–	57	51	59	–
Unpaid paternity leave	8	7	–	–	30	33	44	–
Unpaid family leave	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care	79	80	–	–	76	82	87	84
Extended care facilities	83	84	–	–	78	79	84	81
Physical exam	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage	42	47	52	52	35	38	43	47
Average monthly contribution	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage	67	73	76	75	71	65	72	71
Average monthly contribution	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance	78	76	79	77	67	67	74	64
Survivor income benefits	1	1	2	1	1	1	1	2
Retiree protection available	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans	6	26	26	–	14	21	22	21
Participants in short-term disability plans [2]	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65	54	50	–	47	92	89	92	92
Early retirement available	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years	7	4	–	–	33	16	10	13
Terminal earnings formula	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security	49	46	–	44	18	8	10	49
Participants in defined contribution plans	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans	1	2	3	4	5	5	5	5
Reimbursement accounts [3]	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

27. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1999											2000
	1997	1998	Jan.[P]	Feb.[P]	Mar.[P]	Apr.[P]	May[P]	June[P]	July[P]	Aug.[P]	Sept.[P]	Oct.[P]	Nov.[P]	Dec.[P]	Jan.[P]
Number of stoppages:															
Beginning in period	29	34	1	2	0	1	3	2	1	1	2	0	1	0	0
In effect during period	34	34	5	5	2	3	6	6	6	3	5	2	2	1	1
Workers involved:															
Beginning in period (in thousands)	339	387	1.4	4.1	.0	8.0	9.6	2.2	1.7	11.0	19.1	.0	2.0	.0	.0
In effect during period (in thousands)	351	387	9.2	10.3	4.4	12.4	22.0	21.6	16.3	15.4	34.5	10.1	5.0	3.0	3.0
Days idle:															
Number (in thousands)	4,497	5,116	129.0	104.1	101.2	256.8	314.8	309.4	266.4	118.8	176.2	67.1	63.6	63.0	60.0
Percent of estimated working time[1]	.01	.02	.01	([2])	([2])	.01	.01	.01	.01	([2])	.01	([2])	([2])	([2])	([2])

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[2] Less than 0.005.

[P] = preliminary.

28. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	163.0	166.6	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	168.7	169.7	171.1	171.2	171.3
All items (1967 = 100)	488.3	499.0	497.7	497.9	499.2	500.7	502.9	503.9	504.1	504.1	505.5	508.4	512.5	512.9	513.3
Food and beverages	161.1	164.6	164.2	164.1	164.2	164.7	165.1	165.5	165.7	165.9	166.6	166.8	167.1	167.2	167.8
Food	160.7	164.1	163.7	163.6	163.8	164.2	164.6	165.1	165.2	165.4	166.1	166.3	166.5	166.6	167.3
Food at home	161.1	164.2	163.9	163.7	163.7	164.1	164.5	165.1	165.1	165.4	166.3	166.3	166.4	166.5	167.5
Cereals and bakery products	181.1	185.0	185.1	185.7	186.3	184.9	185.2	185.2	184.8	185.9	185.6	186.0	186.1	187.2	188.6
Meats, poultry, fish, and eggs	147.3	147.9	146.7	147.2	147.3	148.5	149.2	149.2	150.5	149.8	150.2	151.3	152.4	152.9	153.9
Dairy and related products[1]	150.8	159.6	156.2	156.1	155.7	156.5	158.7	164.1	164.6	162.1	160.4	160.9	159.1	160.6	159.6
Fruits and vegetables	198.2	203.1	207.2	203.2	202.0	202.1	202.6	202.2	201.2	204.5	208.4	203.0	201.7	201.6	204.3
Nonalcoholic beverages and beverage materials	133.0	134.3	134.2	134.3	134.3	134.5	134.2	134.6	133.9	134.7	137.1	138.4	138.5	137.6	137.3
Other foods at home	150.8	153.5	153.4	153.6	153.7	154.2	153.9	153.7	153.0	153.3	154.3	154.4	155.1	154.0	155.4
Sugar and sweets	150.2	152.3	153.0	152.4	152.4	152.7	153.5	153.3	152.1	152.3	154.8	154.4	154.6	152.4	153.7
Fats and oils	146.9	148.3	147.2	147.5	148.1	148.6	148.5	149.0	145.3	145.1	147.0	145.6	145.9	144.8	147.0
Other foods	165.5	168.9	168.7	169.2	169.3	169.9	169.2	168.7	169.0	169.4	169.8	170.5	171.6	170.7	172.1
Other miscellaneous foods[1,2]	102.6	104.9	105.0	104.9	104.2	104.8	105.3	104.3	103.9	105.7	104.3	106.4	107.0	105.2	106.4
Food away from home[1]	161.1	165.1	164.6	164.6	165.1	165.6	165.8	166.2	166.5	166.8	167.2	167.6	167.9	168.1	168.3
Other food away from home[1,2]	101.6	105.2	104.3	104.4	105.5	105.8	106.4	106.8	106.9	106.9	107.5	107.9	107.9	108.0	108.1
Alcoholic beverages	165.7	169.7	169.3	169.5	169.9	170.2	170.7	170.5	171.2	171.8	172.4	173.0	173.5	173.6	173.8
Housing	160.4	163.9	163.0	164.1	164.7	165.0	165.2	165.0	164.9	164.8	165.8	166.9	167.6	167.6	167.8
Shelter	182.1	187.3	186.5	187.2	188.0	188.3	188.3	188.5	188.6	188.6	189.8	190.7	191.8	191.8	192.0
Rent of primary residence	172.1	177.5	176.7	177.1	177.5	177.9	178.4	178.8	179.8	180.3	180.8	181.2	181.7	181.9	182.3
	109.0	112.3	111.8	113.8	117.1	117.1	113.8	113.1	108.5	105.8	111.3	115.1	120.9	119.4	117.5
Owners' equivalent rent of primary residence[3]	187.8	192.9	192.2	192.6	193.0	193.4	193.9	194.2	194.9	195.2	195.7	196.1	196.4	196.8	197.2
Tenants' and household insurance[1,2]	99.8	101.3	100.5	102.2	102.1	102.2	102.3	102.2	102.1	102.2	102.4	102.4	102.6	103.1	103.8
Fuels and utilities	128.5	128.8	126.5	130.2	131.1	131.4	132.7	130.3	130.0	129.6	129.9	132.9	131.8	131.7	132.4
Fuels	113.7	113.5	111.0	115.1	116.0	116.2	117.6	115.0	114.6	114.1	114.3	117.6	116.3	116.1	116.8
Fuel oil and other fuels	90.0	91.4	87.7	87.3	87.5	89.2	93.9	97.6	100.7	106.3	114.4	147.2	130.1	123.7	121.6
Gas (piped) and electricity	121.2	120.9	118.4	123.0	124.0	124.1	125.3	122.0	121.4	120.3	119.8	120.6	120.7	121.0	122.0
Household furnishings and operations	126.6	126.7	126.7	126.8	126.8	126.8	127.0	126.6	126.4	126.4	127.0	127.2	127.9	128.2	128.1
Apparel	133.0	131.3	134.2	130.9	127.3	127.5	131.8	134.6	133.6	130.1	126.8	129.2	132.5	133.3	132.2
Men's and boys' apparel	131.8	131.1	133.8	131.4	128.3	127.1	130.5	134.0	133.2	131.5	129.2	130.0	131.5	131.6	132.6
Women's and girls' apparel	126.0	123.3	127.3	122.6	116.1	117.9	125.4	128.4	126.6	121.8	116.0	120.0	125.9	126.7	124.4
Infants' and toddlers' apparel[1]	126.1	129.0	127.6	126.8	127.4	128.3	129.9	132.4	132.6	133.0	133.3	133.1	133.9	132.3	131.7
Footwear	128.0	125.7	127.4	125.4	125.2	123.8	124.7	126.1	126.4	123.7	121.6	122.1	124.7	126.7	126.1
Transportation	141.6	144.4	144.2	143.4	144.7	145.7	146.5	147.3	147.6	148.3	148.3	149.7	153.4	152.9	153.1
Private transportation	137.9	140.5	140.2	139.7	140.6	141.9	142.9	143.3	143.6	144.4	144.4	145.6	149.2	148.7	148.8
New and used motor vehicles[2]	100.1	100.1	99.7	99.7	99.8	99.7	100.1	100.5	100.9	101.1	100.8	100.3	100.4	100.8	101.0
New vehicles	143.4	142.9	142.9	142.5	142.0	141.4	141.6	142.3	143.1	143.6	143.3	143.0	143.3	143.5	143.3
Used cars and trucks[1]	150.6	152.0	149.6	150.9	152.3	153.8	155.7	156.4	156.1	155.0	153.9	153.0	153.0	154.0	155.4
Motor fuel	92.2	100.7	101.4	99.2	102.5	107.8	110.3	110.0	109.3	112.2	112.6	118.1	131.7	128.7	128.3
Gasoline (all types)	91.6	100.1	100.8	98.6	101.9	107.2	109.7	109.4	108.7	111.5	111.9	117.3	130.9	127.9	127.6
Motor vehicle parts and equipment	101.1	100.5	100.2	100.1	100.0	100.1	100.6	100.5	101.2	100.8	100.8	100.9	101.4	101.0	101.1
Motor vehicle maintenance and repair	167.1	171.9	171.3	171.7	172.1	172.1	172.8	173.2	173.6	173.8	174.6	175.2	175.7	175.9	176.3
Public transportation	190.3	197.7	198.4	192.6	200.8	197.1	194.7	201.5	202.2	201.2	199.5	204.2	209.8	209.2	210.4
Medical care	242.1	250.6	249.5	250.2	251.1	251.9	252.3	252.8	253.3	254.2	255.5	257.0	258.1	258.8	259.4
Medical care commodities	221.8	230.7	229.4	230.5	231.7	232.5	233.1	233.2	233.7	234.6	235.2	235.5	236.3	237.0	237.5
Medical care services	246.8	255.1	254.0	254.6	255.5	256.2	256.6	257.1	257.7	258.5	260.1	262.0	263.2	263.9	264.4
Professional services	222.2	229.2	228.6	229.3	229.8	230.1	230.4	230.9	231.4	231.7	233.1	234.9	236.1	236.6	237.1
Hospital and related services	287.5	299.5	297.0	297.6	299.3	301.3	302.1	302.9	303.9	306.3	308.4	310.5	311.5	312.7	313.5
Recreation[2]	101.1	102.1	102.2	102.2	102.2	102.2	101.7	101.8	101.9	102.0	102.3	102.5	102.9	102.9	103.1
Video and audio[1,2]	101.1	100.7	100.9	100.7	100.6	100.9	100.1	100.1	100.1	100.1	100.5	100.8	100.9	100.3	101.3
Education and communication[2]	100.3	101.2	100.4	100.3	100.4	101.2	101.9	102.1	102.2	102.3	102.7	102.2	102.0	101.8	101.8
Education[2]	102.1	107.0	105.6	105.7	106.0	107.5	109.4	109.6	109.3	109.3	110.2	110.6	110.6	110.7	110.9
Educational books and supplies	250.8	261.7	261.6	262.1	262.3	264.5	267.0	269.0	255.7	256.0	273.9	278.3	276.9	276.7	276.8
Tuition, other school fees, and child care	294.2	308.4	304.1	304.4	305.4	309.9	315.3	315.9	316.3	316.3	317.3	318.0	318.3	318.7	319.2
Communication[1,2]	98.7	96.0	95.7	95.5	95.5	95.6	95.3	95.3	95.9	95.9	96.0	94.7	94.3	93.8	93.7
Information and information processing[1,2]	98.5	95.5	95.2	94.9	94.9	95.0	94.7	94.7	95.3	95.4	95.5	94.1	93.6	93.1	93.0
Telephone services[1,2]	100.7	100.1	99.6	99.7	99.5	99.8	99.6	99.8	100.6	100.7	100.9	99.4	98.9	98.6	98.5
Information and information processing other than telephone services[1,4]	39.9	30.5	30.9	29.8	30.0	29.8	29.3	28.7	28.2	28.2	28.0	27.6	27.2	26.7	26.6
Personal computers and peripheral equipment[1,2]	78.2	53.5	55.7	54.5	52.9	50.9	49.7	48.2	47.0	47.2	46.4	45.1	44.2	42.7	42.4
Other goods and services	237.7	258.3	255.8	255.9	258.3	257.6	262.6	263.2	263.0	263.0	264.7	266.7	268.0	271.9	270.2
Tobacco and smoking products	274.8	355.8	345.5	343.2	356.0	350.1	373.8	373.3	369.8	369.1	375.1	383.0	387.3	404.4	393.5
Personal care[1]	156.7	161.1	160.7	161.1	161.1	161.4	161.8	162.4	162.8	162.9	163.4	163.8	164.3	164.8	165.1
Personal care products[1]	148.3	151.8	150.9	152.6	152.0	152.3	153.0	153.4	153.3	152.5	152.8	152.6	153.5	153.4	153.0
Personal care services[1]	166.0	171.4	171.0	170.9	171.4	171.9	172.1	172.9	173.9	174.3	174.9	175.6	176.2	176.2	177.3

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Miscellaneous personal services	234.7	243.0	242.1	242.4	242.9	243.9	244.6	245.6	246.0	246.6	247.6	248.9	249.4	250.9	251.7
Commodity and service group:															
Commodities	141.9	144.4	144.5	143.9	143.9	144.5	145.8	146.4	146.2	146.1	146.2	147.4	149.2	149.3	149.2
Food and beverages	161.1	164.6	164.2	164.1	164.2	164.7	165.1	165.5	165.7	165.9	166.6	166.8	167.1	167.2	167.8
Commodities less food and beverages	130.5	132.5	132.8	131.9	131.9	132.5	134.3	134.9	134.6	134.4	134.0	135.7	138.4	138.4	138.0
Nondurables less food and beverages	132.6	137.5	138.2	136.6	136.7	138.0	141.0	141.9	141.3	140.9	140.5	143.9	148.5	148.5	147.6
Apparel	133.0	131.3	134.2	130.9	127.3	127.5	131.8	134.6	133.6	130.1	126.8	129.2	132.5	133.3	132.2
Nondurables less food, beverages, and apparel	137.4	146.0	145.6	144.8	146.8	148.8	151.2	151.2	150.7	152.1	153.1	157.2	162.7	162.3	161.5
Durables	127.6	126.0	125.8	125.7	125.6	125.4	125.7	125.9	126.0	125.9	125.7	125.3	125.6	125.6	125.8
Services	184.2	188.8	187.9	188.6	189.5	189.9	190.1	190.2	190.5	190.5	191.4	192.2	193.1	193.3	193.6
Rent of shelter[3]	189.6	195.0	194.2	194.9	195.7	196.1	196.1	196.3	196.3	196.3	197.6	198.5	199.7	199.8	199.9
Transporatation services	187.9	190.7	190.4	189.3	191.0	190.2	189.9	191.9	192.7	192.8	193.0	193.7	195.0	195.2	195.7
Other services	216.9	223.1	221.9	222.2	222.6	223.9	224.5	225.1	226.0	226.5	227.4	227.4	227.8	228.0	228.4
Special indexes:															
All items less food	163.4	167.0	166.6	166.7	167.2	167.7	168.5	168.8	168.8	168.8	169.2	170.3	171.9	172.0	172.1
All items less shelter	157.2	160.2	159.9	159.7	160.1	160.6	161.6	162.0	162.1	162.1	162.3	163.3	164.8	164.9	165.1
All items less medical care	158.6	162.0	161.6	161.6	162.0	162.5	163.2	163.6	163.6	163.6	164.0	164.9	166.3	166.4	166.5
Commodities less food	132.0	134.0	134.3	133.4	133.4	134.0	135.8	136.3	136.1	135.9	135.6	137.2	139.9	139.9	139.4
Nondurables less food	134.6	139.4	140.1	138.6	138.7	139.9	142.8	143.7	143.1	142.8	142.4	145.7	150.1	150.1	149.3
Nondurables less food and apparel	139.2	147.5	147.0	146.3	148.2	150.0	152.3	152.3	151.9	153.2	154.2	158.0	163.0	162.7	161.9
Nondurables	146.9	151.2	151.4	150.5	150.6	151.5	153.2	154.0	153.7	153.6	153.7	155.6	158.1	158.2	158.0
Services less rent of shelter[3]	191.8	195.8	194.7	195.6	196.5	196.9	197.3	197.4	197.9	198.0	198.6	199.2	199.9	200.2	200.9
Services less medical care services	178.4	182.7	181.8	182.6	183.4	183.8	183.9	184.1	184.3	184.3	185.1	185.8	186.7	186.9	187.2
Energy	102.9	106.6	105.6	106.8	108.7	111.3	113.2	111.6	111.2	112.2	112.5	116.7	122.2	120.7	121.0
All items less energy	170.9	174.4	174.1	174.0	174.3	174.5	175.1	175.7	175.8	175.7	176.2	176.8	177.7	178.0	178.1
All items less food and energy	173.4	177.0	176.6	176.6	176.9	177.1	177.7	178.3	178.4	178.2	178.7	179.4	180.4	180.7	180.8
Commodities less food and energy	143.2	144.1	144.5	143.7	143.2	143.0	144.6	145.3	145.0	144.2	143.6	144.2	145.3	145.9	145.5
Energy commodities	92.1	100.0	100.3	98.3	101.3	106.3	109.1	109.1	108.7	111.8	112.8	120.6	131.7	128.4	127.9
Services less energy	190.6	195.7	195.0	195.3	196.1	196.5	196.6	197.2	197.5	197.7	198.7	199.5	200.5	200.7	200.9
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	159.7	163.2	162.8	162.8	163.3	163.8	164.7	165.0	165.1	165.1	165.5	166.4	167.8	167.9	168.1
All items (1967 = 100)	475.6	486.2	484.9	485.0	486.3	487.8	490.5	491.5	491.7	491.8	492.9	495.6	499.7	500.1	500.7
Food and beverages	160.4	163.8	163.3	163.3	163.4	163.9	164.3	164.7	164.9	165.2	165.9	166.1	166.4	166.5	167.2
Food	160.0	163.4	162.9	162.8	163.0	163.5	163.9	164.4	164.5	164.7	165.4	165.6	165.9	166.0	166.7
Food at home	160.0	163.0	162.6	162.5	162.5	162.9	163.5	164.0	164.0	164.2	165.1	165.1	165.3	165.4	166.4
Cereals and bakery products	180.9	184.7	184.8	185.5	186.1	184.8	185.0	185.0	184.5	185.7	185.5	185.8	185.9	186.9	188.4
Meats, poultry, fish, and eggs	147.0	147.6	146.1	146.9	146.8	148.2	148.9	148.8	150.1	149.4	149.8	150.8	152.0	152.5	153.5
Dairy and related products[1]	150.4	159.4	155.8	155.7	155.3	156.0	158.4	164.0	164.6	161.9	159.9	160.4	158.7	160.2	159.3
Fruits and vegetables	197.0	201.8	205.3	201.9	201.0	201.2	201.6	201.0	199.8	202.8	207.0	201.7	200.5	200.5	203.1
Nonalcoholic beverages and beverage materials	131.8	133.2	133.1	133.2	133.1	133.2	133.0	133.4	132.7	133.5	136.0	137.6	137.8	136.7	136.4
Other foods at home	150.2	152.8	152.6	152.8	153.0	153.5	153.3	152.9	152.3	152.7	153.7	153.8	154.5	153.4	154.9
Sugar and sweets	150.1	152.2	152.8	152.0	152.0	152.6	153.3	153.2	152.0	152.3	154.8	154.3	154.5	152.3	153.6
Fats and oils	146.5	147.9	147.0	147.2	147.8	148.3	148.1	148.6	144.9	144.7	146.8	145.2	145.7	144.5	146.9
Other foods	165.4	168.8	168.5	169.0	169.2	169.7	169.2	168.5	168.8	169.4	169.8	170.5	171.6	170.7	172.2
Other miscellaneous foods[1,2]	102.6	104.6	104.7	104.4	103.9	104.4	105.1	103.8	103.4	105.2	103.9	106.2	106.7	104.7	106.1
Food away from home[1]	161.1	165.0	164.5	164.4	164.9	165.5	165.8	166.1	166.5	166.8	167.1	167.6	167.9	168.1	168.3
Other food away from home[1,2]	101.6	105.1	104.2	104.5	105.3	105.8	106.2	106.6	106.8	106.9	107.4	107.8	107.8	108.3	108.5
Alcoholic beverages	164.6	168.8	168.5	168.7	169.1	169.2	169.8	169.5	170.4	171.0	171.6	172.2	172.8	172.9	172.9
Housing	156.7	160.0	159.2	160.2	160.7	161.0	161.3	161.0	161.1	161.1	161.8	162.7	163.2	163.3	163.6
Shelter	176.6	181.6	180.9	181.5	182.0	182.4	182.6	182.8	183.1	183.3	184.1	184.8	185.6	185.8	186.1
Rent of primary residence	171.7	177.1	176.4	176.8	177.1	177.5	178.0	178.4	179.3	179.9	180.3	180.7	181.2	181.4	181.8
Lodging away from home[2]	109.0	122.2	112.0	113.8	116.7	116.8	113.8	113.1	108.4	105.7	110.8	114.5	119.9	118.7	117.8
Owners' equivalent rent of primary residence[3]	171.1	175.7	175.1	175.4	175.7	176.1	176.5	176.8	177.4	177.8	178.2	178.6	178.8	179.1	179.5
Tenants' and household insurance[1,2]	100.0	101.6	100.9	102.3	102.2	102.3	102.5	102.4	102.3	102.4	102.6	102.6	102.8	103.3	104.0
Fuels and utilities	128.4	128.7	126.3	130.2	131.1	131.4	132.6	130.1	129.8	129.2	129.5	132.0	131.2	131.1	131.9
Fuels	113.3	113.0	110.6	114.7	115.7	115.9	117.2	114.4	114.0	113.5	113.3	116.3	115.4	115.2	116.0
Fuel oil and other fuels	90.3	91.7	88.0	87.8	87.6	89.3	93.9	97.7	100.7	106.0	114.0	144.5	129.6	123.0	120.9
Gas (piped) and electricity	120.8	120.4	117.9	122.6	123.6	123.7	124.9	121.5	120.9	119.8	119.4	120.1	120.2	120.5	121.6
Household furnishings and operations	125.0	124.7	124.8	124.8	124.9	124.7	124.8	124.5	124.2	124.2	124.5	124.6	125.3	125.6	125.5
Apparel	131.6	130.1	133.0	129.6	126.4	126.4	130.5	133.1	132.3	129.0	125.9	127.9	131.0	131.8	130.9
Men's and boys' apparel	131.4	131.2	134.0	131.6	128.6	127.2	130.3	134.0	133.3	131.6	129.3	129.9	131.5	131.5	132.7
Women's and girls' apparel	123.9	121.3	125.5	120.6	114.4	116.0	123.3	126.0	124.4	119.8	114.2	118.0	123.5	124.3	122.1
Infants' and toddlers' apparel[1]	126.7	130.3	128.9	128.0	128.4	129.6	131.4	134.1	134.3	134.8	134.9	134.7	135.7	134.1	133.4
Footwear	128.7	126.2	127.9	125.8	125.8	124.4	125.1	126.6	126.9	124.2	122.3	122.6	124.7	127.1	126.6
Transportation	140.5	143.4	143.1	142.4	143.7	145.0	146.0	146.6	146.9	147.6	147.7	149.1	152.9	152.2	152.5
Private transportation	138.0	140.7	140.3	139.9	140.9	142.4	143.6	143.9	144.2	145.0	145.1	146.4	150.1	149.5	149.7
New and used motor vehicles[2]	100.3	100.4	99.8	100.0	100.1	100.2	100.7	101.2	101.5	101.5	101.2	100.7	100.8	101.2	101.5

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
New vehicles	144.6	144.0	144.0	143.6	143.2	142.6	142.8	143.5	144.3	144.7	144.5	144.2	144.5	144.7	144.5
Used cars and trucks[1]	152.0	153.3	150.9	152.2	153.7	155.2	157.0	157.7	157.3	156.3	155.3	154.4	154.4	155.4	156.8
Motor fuel	92.2	100.8	101.3	99.2	102.6	107.8	110.6	110.0	109.5	112.3	112.9	118.6	132.0	128.5	128.5
Gasoline (all types)	91.7	100.2	100.8	98.7	102.1	107.3	110.0	109.4	108.9	111.7	112.3	117.9	131.2	127.8	127.9
Motor vehicle parts and equipment	100.5	100.0	99.7	99.6	99.5	99.6	99.9	99.8	100.6	100.2	100.3	100.5	100.9	100.6	100.5
Motor vehicle maintenance and repair	168.2	173.3	172.7	173.1	173.5	173.5	174.3	174.7	175.1	175.2	176.1	176.6	177.2	177.4	177.8
Public transportation	187.1	193.1	193.9	189.0	195.7	192.5	190.7	196.3	197.0	196.0	194.8	198.8	203.4	202.9	203.9
Medical care	241.4	249.7	248.7	249.4	250.3	251.0	251.4	251.9	252.5	253.2	254.5	256.2	257.3	258.0	258.5
Medical care commodities	218.6	226.8	225.7	226.6	227.8	228.4	229.0	229.1	229.5	230.2	230.7	231.0	231.8	232.4	232.9
Medical care services	246.6	254.9	253.8	254.5	255.3	256.0	256.4	257.0	257.6	258.4	259.9	261.9	263.1	263.8	264.4
Professional services	223.7	230.8	230.2	231.0	231.4	231.7	232.0	232.5	233.1	233.4	234.8	236.7	238.0	238.6	239.0
Hospital and related services	283.6	295.5	293.0	293.6	295.3	297.3	298.2	298.9	299.8	302.1	304.1	306.4	307.5	308.7	309.5
Recreation[2]	100.9	101.3	101.5	101.6	101.6	101.5	101.0	101.1	101.0	101.2	101.4	101.6	102.0	102.0	102.3
Video and audio[1,2]	101.1	100.5	100.6	100.5	100.4	100.7	99.8	99.9	99.9	99.8	100.2	100.4	100.6	100.0	101.0
Education and communication[2]	100.4	101.5	100.7	100.7	100.8	101.5	102.1	102.3	102.5	102.5	103.0	102.5	102.2	102.1	102.1
Education[2]	102.1	107.2	105.9	106.0	106.3	107.7	109.5	109.7	109.4	109.4	110.5	110.9	111.0	111.1	111.3
Educational books and supplies	253.1	264.1	264.3	264.8	265.0	267.2	269.9	271.8	256.5	256.9	276.6	281.3	280.0	279.9	280.0
Tuition, other school fees, and child care	288.5	302.8	298.7	299.2	300.2	304.1	309.5	310.0	310.4	310.4	311.7	312.7	312.8	313.4	313.8
Communication[1,2]	99.1	96.9	96.5	96.4	96.3	96.5	96.2	96.3	96.9	97.0	97.1	95.7	95.3	94.8	94.7
Information and information processing[1,2]	99.0	96.5	96.2	96.0	96.0	96.1	95.8	95.9	96.6	96.6	96.7	95.3	94.8	94.4	94.3
Telephone services[1,2]	100.7	100.2	99.8	99.9	99.7	99.9	99.7	100.0	100.8	100.9	101.1	99.6	99.1	98.8	98.7
Information and information processing other than telephone services[1,4]	41.2	31.6	31.8	30.8	31.1	30.8	30.3	29.9	29.3	29.3	28.9	28.6	28.2	27.6	27.5
Personal computers and peripheral equipment[1,2]	77.9	53.1	55.1	54.0	52.5	50.6	49.4	48.1	46.9	46.9	45.7	44.5	43.6	42.0	41.8
Other goods and services	236.1	261.9	258.8	258.7	262.0	260.7	267.3	267.9	267.4	267.3	269.3	271.7	273.3	278.0	275.4
Tobacco and smoking products	274.8	356.2	345.9	343.5	356.6	350.6	374.4	374.0	370.4	369.7	375.7	383.6	387.8	404.9	393.7
Personal care[1]	156.8	161.3	160.8	161.3	161.3	161.6	161.9	162.6	163.0	163.1	163.5	163.9	164.3	164.6	164.9
Personal care products[1]	149.3	152.5	151.6	153.3	152.7	153.1	153.7	154.1	154.0	153.1	153.4	153.2	154.1	153.9	153.4
Personal care services[1]	166.3	171.7	171.4	171.2	171.8	172.2	172.4	173.2	174.4	174.7	175.3	176.1	176.6	176.6	177.7
Miscellaneous personal services	234.0	243.1	242.3	242.6	243.2	243.8	244.5	245.5	245.9	246.7	247.6	248.9	249.4	250.4	251.2
Commodity and service group:															
Commodities	141.8	144.7	144.6	144.0	144.2	144.8	146.3	146.8	146.6	146.6	146.6	147.8	149.8	149.9	149.9
Food and beverages	160.4	163.8	163.3	163.3	163.4	163.9	164.3	164.7	164.9	165.2	165.9	166.1	166.4	166.5	167.2
Commodities less food and beverages	130.6	133.2	133.4	132.5	132.7	133.4	135.4	165.9	135.6	135.4	135.1	136.8	139.6	139.6	139.3
Nondurables less food and beverages	132.1	138.1	138.8	137.0	137.5	138.8	142.1	142.9	142.2	142.0	141.7	145.1	150.2	150.2	149.4
Apparel	131.6	130.1	133.0	129.6	126.4	126.4	130.5	133.1	132.3	129.0	125.9	127.9	131.0	131.8	130.9
Nondurables less food, beverages, and apparel	137.0	147.2	146.6	145.7	148.1	150.2	153.2	153.1	152.5	153.9	155.0	159.3	165.7	165.2	164.4
Durables	127.3	126.0	125.6	125.6	125.7	125.7	126.1	126.3	126.4	126.3	126.0	125.6	125.8	126.0	126.2
Services	181.0	185.3	184.4	185.2	185.9	186.3	186.6	186.7	187.1	187.2	187.9	188.5	189.2	189.4	189.8
Rent of shelter[3]	170.1	174.9	174.2	174.7	175.3	175.6	175.8	176.1	176.3	176.5	177.3	178.0	178.7	178.9	179.2
Transporatation services	185.4	187.9	187.5	186.7	188.0	187.4	187.3	189.0	189.8	189.9	190.2	190.8	191.8	192.0	192.4
Other services	213.7	219.6	218.4	218.8	219.2	220.3	220.9	221.6	222.3	222.9	223.8	223.7	224.0	224.2	224.6
Special indexes:															
All items less food	159.5	163.1	162.6	162.7	163.2	163.7	164.7	165.0	165.1	165.1	165.4	166.4	168.0	168.2	168.3
All items less shelter	155.0	158.1	157.7	157.6	158.0	158.6	159.7	160.1	160.1	160.1	160.3	161.3	162.8	163.0	163.1
All items less medical care	155.8	159.2	158.8	158.8	159.2	159.7	160.7	161.0	161.1	161.1	161.4	162.3	163.6	163.8	164.0
Commodities less food	132.0	134.6	134.8	133.9	134.2	134.8	136.7	137.2	137.0	136.8	136.5	138.2	141.0	141.0	140.7
Nondurables less food	134.1	140.0	140.6	138.9	139.4	140.7	143.8	144.6	144.0	143.8	143.6	146.8	151.7	151.7	150.9
Nondurables less food and apparel	138.7	148.4	147.9	147.0	149.3	151.2	154.0	153.8	153.4	154.7	155.8	159.8	165.7	165.3	164.5
Nondurables	146.5	151.3	151.4	150.5	150.8	151.7	153.6	154.3	154.0	154.0	154.2	156.0	158.8	158.9	158.8
Services less rent of shelter[3]	170.7	174.1	173.0	174.0	174.7	175.0	175.5	175.4	175.8	175.9	176.4	176.9	177.4	177.7	178.2
Services less medical care services	175.4	179.5	178.6	179.4	180.1	180.4	180.7	180.8	181.1	181.2	181.9	182.4	183.1	183.3	183.7
Energy	102.1	106.1	105.2	106.2	108.4	111.1	113.1	111.4	111.0	112.1	112.5	116.7	122.9	121.0	121.5
All items less energy	167.6	171.1	170.7	170.6	170.9	171.1	171.8	172.4	172.6	172.5	172.8	173.3	174.1	174.5	174.6
All items less food and energy	169.6	173.1	172.8	172.7	172.9	173.1	173.9	174.5	174.7	174.5	174.8	175.3	176.2	176.7	176.7
Commodities less food and energy	142.7	144.3	144.5	143.8	143.5	143.3	145.0	145.7	145.4	144.6	144.1	144.6	145.6	146.4	146.0
Energy commodities	92.3	100.3	100.6	98.6	101.8	106.8	109.7	109.4	109.1	112.1	113.1	120.4	132.0	128.3	128.3
Services less energy	187.7	192.6	191.9	192.2	192.8	193.2	193.4	194.0	194.4	194.7	195.5	196.2	196.9	197.1	197.5

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

NOTE: Index applies to a month as a whole, not to any specific date.

29. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

Area	Pricing schedule[1]	All Urban Consumers						Urban Wage Earners					
		1999		2000				1999		2000			
		Apr.	May	Feb.	Mar.	Apr.	May	Apr.	May	Feb.	Mar.	Apr.	May
U.S. city average	M	166.2	166.2	169.7	171.1	171.2	171.3	162.7	162.8	166.4	167.8	167.9	168.1
Region and area size[2]													
Northeast urban	M	172.8	172.8	177.4	178.3	178.4	178.2	169.5	169.7	174.3	175.1	175.3	175.3
Size A—More than 1,500,000	M	173.6	173.6	178.3	179.2	179.1	179.0	169.3	169.4	174.1	174.9	175.0	175.0
Size B/C—50,000 to 1,500,000[3]	M	103.9	103.9	106.7	107.2	107.4	107.3	103.5	103.5	106.3	106.8	107.0	106.9
Midwest urban[4]	M	162.2	162.2	165.8	167.0	166.9	167.4	158.2	158.3	162.1	163.4	163.2	163.8
Size A—More than 1,500,000	M	163.6	163.6	167.2	168.3	168.2	169.0	158.8	158.9	162.7	163.8	163.6	164.5
Size B/C—50,000 to 1,500,000[3]	M	103.7	103.7	106.0	106.8	106.8	106.9	103.5	103.4	106.1	106.9	106.9	107.0
Size D—Nonmetropolitan (less than 50,000)	M	156.4	156.5	159.8	161.5	161.3	161.4	154.4	154.4	158.3	160.0	159.9	160.0
South urban	M	161.5	161.6	164.7	166.4	166.6	166.6	159.4	159.7	163.0	164.6	164.9	164.9
Size A—More than 1,500,000	M	160.5	160.5	164.1	165.9	166.1	166.1	157.9	158.1	161.8	163.4	163.7	163.7
Size B/C—50,000 to 1,500,000[3]	M	103.9	104.1	105.9	106.9	107.1	107.1	103.5	103.7	105.7	106.7	106.9	107.0
Size D—Nonmetropolitan (less than 50,000)	M	162.6	162.1	165.1	166.8	166.7	167.0	162.7	162.6	165.8	167.6	167.6	167.9
West urban	M	169.0	168.7	171.9	173.4	173.7	173.9	164.9	164.7	167.4	169.1	169.4	169.6
Size A—More than 1,500,000	M	170.0	169.8	173.3	174.9	175.1	175.4	164.2	164.0	167.1	168.7	169.0	169.3
Size B/C—50,000 to 1,500,000[3]	M	105.1	104.8	106.2	107.1	107.2	107.3	105.0	104.7	105.9	106.8	107.1	107.1
Size classes:													
A[5]	M	150.5	150.5	154.0	155.2	155.2	155.4	148.9	149.0	152.5	153.6	153.7	154.0
B/C[3]	M	104.1	104.1	106.1	106.9	107.1	107.1	103.7	103.8	105.9	106.8	106.9	107.0
D	M	162.1	161.9	164.9	166.7	166.7	166.8	160.9	160.8	164.1	165.9	166.0	166.1
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI	M	167.6	168.2	171.3	172.0	171.7	173.5	161.7	162.3	165.6	166.4	166.1	167.9
Los Angeles–Riverside–Orange County, CA	M	166.6	166.2	169.2	170.6	170.6	171.1	160.1	159.7	162.4	163.9	163.9	164.4
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	176.0	176.1	180.4	181.4	181.2	181.3	171.3	171.5	175.8	176.6	176.6	176.9
Boston–Brockton–Nashua, MA–NH–ME–CT	1	–	174.2	–	182.7	–	181.6	–	172.6	–	181.1	–	180.5
Cleveland–Akron, OH	1	–	161.5	–	166.8	–	166.4	–	153.7	–	159.2	–	158.9
Dallas–Ft Worth, TX	1	–	157.2	–	163.1	–	163.2	–	157.0	–	162.9	–	163.1
Washington–Baltimore, DC–MD–VA–WV[7]	1	–	103.6	–	107.0	–	106.7	–	103.4	–	106.9	–	106.6
Atlanta, GA	2	164.0	–	167.4	–	169.8	–	160.9	–	164.9	–	167.2	–
Detroit–Ann Arbor–Flint, MI	2	164.1	–	167.2	–	168.1	–	158.7	–	162.0	–	162.8	–
Houston–Galveston–Brazoria, TX	2	148.3	–	152.1	–	152.7	–	146.6	–	150.5	–	151.3	–
Miami–Ft. Lauderdale, FL	2	161.7	–	165.9	–	166.9	–	159.1	–	163.5	–	164.5	–
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	171.1	–	174.7	–	175.7	–	170.6	–	174.5	–	175.7	–
San Francisco–Oakland–San Jose, CA	2	172.2	–	176.5	–	178.6	–	168.8	–	172.5	–	174.8	–
Seattle–Tacoma–Bremerton, WA	2	172.2	–	176.0	–	177.7	–	167.8	–	171.5	–	173.2	–

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:
M—Every month.
1—January, March, May, July, September, and November.
2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the *CPI Detailed Report*: Anchorage, AK; Cincinnati–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Portland–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

– Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date.

30. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1991	1992	1993	1994	1995	1996	1997	1998	1999
Consumer Price Index for All Urban Consumers:									
All items:									
Index	136.2	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6
Percent change	4.2	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2
Food and beverages:									
Index	136.8	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6
Percent change	3.6	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2
Housing:									
Index	133.6	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9
Percent change	4.0	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2
Apparel:									
Index	128.7	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3
Percent change	3.7	2.5	1.4	–.2	–1.0	–.2	.9	.1	–1.3
Transportation:									
Index	123.8	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4
Percent change	2.7	2.2	3.1	3.0	3.6	2.8	0.9	–1.9	2.0
Medical care:									
Index	177.0	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6
Percent change	8.7	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5
Other goods and services:									
Index	171.6	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3
Percent change	7.9	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	134.3	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2
Percent change	4.1	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2

31. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		1999								2000				
	1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Finished goods	130.7	133.0	132.4	132.7	132.9	133.7	134.7	135.1	134.9	134.9	134.7	136.0	137.0	137.0	137.5
Finished consumer goods	128.9	132.0	131.2	131.7	132.1	133.2	134.6	134.5	134.3	134.3	133.9	135.6	137.0	136.9	137.6
Finished consumer foods	134.3	135.1	134.5	135.1	134.6	135.9	136.7	135.8	135.4	135.6	135.0	135.9	135.9	137.1	138.0
Finshed consumer goods excluding foods	126.4	130.5	129.6	130.0	130.8	131.9	133.5	133.7	133.6	133.6	133.3	135.4	137.3	136.6	137.2
Nondurable goods less food	122.2	127.9	126.6	127.5	128.9	130.4	132.8	131.5	131.6	131.7	131.4	134.3	137.0	136.0	136.9
Durable goods	132.9	133.0	132.8	132.3	131.7	131.6	131.2	134.9	134.6	134.4	134.1	134.0	134.0	133.9	134.0
Capital equipment	137.6	137.6	137.6	137.2	137.0	136.9	136.7	138.5	138.3	138.3	138.4	138.4	138.5	138.7	138.7
Intermediate materials, supplies, and components	123.0	123.2	122.2	123.0	123.9	124.6	125.3	125.0	125.2	125.4	125.9	126.8	127.9	128.0	128.3
Materials and components for manufacturing	126.1	124.6	123.8	124.1	124.6	125.0	125.4	125.9	125.9	125.9	126.4	126.8	127.4	128.0	128.4
Materials for food manufacturing	123.2	120.8	119.6	120.0	119.0	121.1	122.0	122.2	120.9	118.2	117.6	117.8	118.1	119.6	120.6
Materials for nondurable manufacturing	126.7	124.9	123.3	123.8	124.8	125.5	126.5	127.7	127.8	128.2	128.6	129.6	131.3	132.1	133.2
Materials for durable manufacturing	128.0	125.1	124.3	124.8	126.1	126.2	126.2	126.5	126.7	127.2	128.6	129.4	129.5	129.8	129.6
Components for manufacturing	125.9	125.7	125.6	125.7	125.6	125.6	125.7	125.7	125.7	125.8	125.9	125.7	125.7	125.9	126.0
Materials and components for construction	146.8	148.9	148.5	149.5	150.5	150.4	149.6	149.1	149.4	149.8	150.4	150.8	151.3	151.6	151.1
Processed fuels and lubricants	81.1	84.6	82.5	84.9	87.6	90.0	92.5	89.3	90.2	90.6	91.5	94.9	98.1	96.3	96.7
Containers	140.8	142.5	141.6	142.2	142.1	143.6	145.7	146.3	146.5	146.5	147.2	147.3	148.3	151.8	152.8
Supplies	134.8	134.2	133.7	133.9	133.9	134.2	134.4	134.8	135.0	135.1	135.2	135.5	136.0	136.2	136.6
Crude materials for further processing	96.8	98.2	97.4	97.4	97.9	103.1	107.3	104.0	109.2	103.5	105.8	111.2	113.3	110.6	115.4
Foodstuffs and feedstuffs	103.9	98.7	99.6	99.5	96.2	100.1	100.1	98.8	99.5	96.9	96.5	97.6	101.3	103.5	104.6
Crude nonfood materials	88.4	94.3	92.3	92.5	95.5	101.5	108.3	103.8	111.9	104.3	108.3	116.5	117.5	111.5	118.6
Special groupings:															
Finished goods, excluding foods	129.5	132.3	131.6	131.8	132.3	133.0	134.0	134.7	134.7	134.6	134.5	135.9	137.2	136.8	137.2
Finished energy goods	75.1	78.8	77.5	78.6	80.7	83.5	85.8	83.5	83.6	83.6	83.8	87.4	92.0	90.1	91.5
Finished goods less energy	141.1	143.0	142.5	142.6	142.3	142.5	143.1	144.2	144.0	144.0	143.6	144.2	144.3	144.7	145.0
Finished consumer goods less energy	142.5	145.2	144.6	144.8	144.5	144.9	145.8	146.6	146.3	146.4	145.8	146.6	146.7	147.2	147.6
Finished goods less food and energy	143.7	146.1	145.6	145.5	145.3	145.2	145.7	147.5	147.4	147.4	147.0	147.5	147.6	147.7	147.8
Finished consumer goods less food and energy	147.7	151.7	151.0	151.0	150.9	150.7	151.7	153.6	153.4	153.4	152.8	153.6	153.6	153.7	153.8
Consumer nondurable goods less food and energy	159.1	166.3	165.2	165.7	165.9	165.7	167.9	168.1	168.2	168.2	167.3	169.0	169.0	169.2	169.4
Intermediate materials less foods and feeds	123.4	123.9	122.9	123.7	124.7	125.4	126.0	125.7	126.0	126.2	126.8	127.7	128.8	128.9	129.2
Intermediate foods and feeds	116.2	111.1	109.8	110.2	109.1	110.9	111.8	112.4	111.6	109.7	109.3	110.3	110.8	111.8	113.2
Intermediate energy goods	80.8	84.6	82.2	84.6	87.2	89.6	92.1	89.0	89.9	90.3	91.2	94.5	97.8	96.0	96.5
Intermediate goods less energy	132.4	131.7	131.1	131.5	131.9	132.3	132.5	132.9	133.0	133.0	133.5	133.8	134.4	134.9	135.2
Intermediate materials less foods and energy	133.5	133.1	132.5	132.9	133.4	133.7	133.9	134.2	134.4	134.6	135.1	135.4	136.0	136.5	136.7
Crude energy materials	68.6	78.5	77.1	77.1	80.4	87.3	95.4	88.7	98.9	87.9	92.0	102.2	103.4	96.3	105.8
Crude materials less energy	113.6	107.9	107.6	107.7	105.8	109.4	110.0	109.8	110.5	109.5	110.2	111.4	114.1	115.2	115.8
Crude nonfood materials less energy	142.1	135.2	131.4	132.2	134.2	136.8	139.1	141.7	142.6	146.0	149.8	151.0	151.1	149.0	148.5

. Producer Price Indexes for the net output of major industry groups

ecember 1984 = 100, unless otherwise indicated]

C	Industry	Annual average		1999								2000				
		1998	1999	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
–	**Total mining industries**	70.8	78.0	76.5	76.3	78.7	84.7	91.5	87.7	95.1	86.7	89.5	97.3	100.1	94.9	100.0
10	Metal mining	73.2	70.3	69.7	67.3	68.8	69.3	70.4	76.3	73.4	72.6	73.9	75.5	73.6	73.4	71.7
12	Coal mining (12/85 = 100)	89.5	87.3	87.8	88.2	86.9	86.9	85.9	86.0	86.1	85.4	85.3	84.6	85.8	84.4	86.0
13	Oil and gas extraction (12/85 = 100)	68.3	78.5	76.3	76.2	79.6	87.6	96.9	91.2	101.6	90.4	94.2	104.5	108.6	101.8	108.3
14	Mining and quarrying of nonmetallic minerals, except fuels	132.2	134.0	133.8	134.2	134.2	134.2	134.3	134.4	134.4	134.4	135.0	135.0	135.2	136.0	137.5
–	**Total manufacturing industries**	126.2	128.3	127.7	127.8	128.3	129.0	129.7	130.2	130.3	130.5	130.8	132.0	133.0	132.8	133.4
20	Food and kindred products	126.3	126.3	125.3	126.0	125.9	126.8	127.5	127.5	127.1	126.7	126.7	127.3	127.5	128.2	129.1
21	Tobacco manufactures	243.1	325.7	316.1	316.2	316.1	316.5	344.5	344.4	344.5	345.0	329.4	348.6	347.3	347.2	347.1
22	Textile mill products	118.6	116.3	116.4	116.3	115.9	116.0	115.9	116.1	115.9	116.1	116.2	116.3	116.0	116.1	116.3
23	Apparel and other finished products made from fabrics and similar materials	124.8	125.3	125.3	125.1	125.1	125.5	125.6	125.6	125.4	125.3	125.2	125.3	125.3	125.6	125.6
24	Lumber and wood products, except furniture	157.0	161.8	161.9	165.2	168.5	166.9	163.1	160.0	159.6	160.6	161.4	161.9	162.0	161.8	159.0
25	Furniture and fixtures	139.7	141.3	140.9	141.1	141.3	141.6	141.8	142.0	142.0	142.1	142.4	142.4	142.8	143.0	143.3
26	Paper and allied products	136.2	136.4	134.8	135.8	136.3	137.3	138.7	139.9	140.2	140.4	141.0	141.5	143.5	145.8	146.9
27	Printing, publishing, and allied industries	174.0	177.6	177.2	177.2	177.4	177.7	178.1	178.6	179.1	179.2	180.4	180.6	181.2	181.3	181.7
28	Chemicals and allied products	148.7	149.7	148.2	149.0	149.9	150.0	151.0	152.8	153.0	152.9	153.6	154.1	154.8	155.5	156.9
29	Petroleum refining and related products	66.3	76.8	75.4	74.2	79.6	85.3	90.2	87.0	89.5	91.8	94.0	103.7	112.2	107.8	111.4
30	Rubber and miscellaneous plastics products	122.1	122.2	121.6	121.9	122.1	122.5	122.8	122.9	123.3	123.4	123.5	123.7	124.0	124.1	123.3
31	Leather and leather products	137.1	136.5	136.0	136.5	136.7	136.7	136.9	137.0	137.0	137.0	137.5	137.5	137.5	137.4	137.5
32	Stone, clay, glass, and concrete products	129.3	132.6	132.5	132.7	132.7	133.1	133.2	133.6	133.7	133.5	134.4	134.5	134.7	134.7	134.8
33	Primary metal industries	120.9	115.8	114.9	115.0	115.4	115.7	116.4	117.1	117.1	117.4	118.6	119.1	119.8	120.5	120.5
34	Fabricated metal products, except machinery and transportation transportation equipment	128.7	129.1	128.9	129.1	129.1	129.1	129.2	129.4	129.6	129.7	129.9	130.1	130.4	130.4	130.3
35	Machinery, except electrical	117.7	117.3	117.5	117.5	117.3	117.2	117.1	117.1	117.1	117.0	117.1	117.3	117.4	117.4	117.5
36	Electrical and electronic machinery, equipment, and supplies	110.4	109.5	109.7	109.5	109.5	109.5	109.2	109.1	109.1	108.9	108.7	108.8	108.5	108.7	108.6
37	Transportation	133.6	134.5	134.1	133.6	133.0	132.9	132.6	136.7	136.2	136.2	136.3	135.9	136.1	136.3	136.1
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	126.0	125.7	125.9	125.3	125.1	125.0	124.9	125.2	125.3	125.6	126.0	126.0	125.9	126.1	126.3
39	Miscellaneous manufacturing industries (12/85 = 100)	129.7	130.3	130.5	130.5	130.5	130.1	130.0	130.4	130.2	130.5	130.7	131.0	130.9	131.1	131.3
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)	111.6	114.8	114.3	114.6	114.8	115.1	115.8	115.5	115.5	115.8	116.5	116.8	118.1	118.2	118.8
43	U.S. Postal Service (06/89 = 100)	132.3	135.3	135.4	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2
44	Water transportation (12/92 = 100)	105.6	113.0	114.4	116.8	117.4	117.2	117.3	116.7	116.7	116.1	116.4	117.5	117.2	118.5	119.8
45	Transportation by air (12/92 = 100)	124.5	130.8	130.0	130.9	131.4	131.7	131.8	133.1	133.4	134.2	141.0	136.8	138.4	142.5	149.6
46	Pipelines, except natural gas (12/92 = 100)	99.2	98.3	98.5	98.6	98.2	98.2	98.3	98.3	98.2	98.2	102.1	101.9	101.9	101.9	101.9

33. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1991	1992	1993	1994	1995	1996	1997	1998	1999
Finished goods									
Total	121.7	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0
Foods	124.1	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1
Energy	78.1	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8
Other	131.1	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1
Intermediate materials, supplies, and components									
Total	114.4	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2
Foods	115.3	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8
Energy	85.1	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3
Other	121.4	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1
Crude materials for further processing									
Total	101.2	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2
Foods	105.5	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7
Energy	80.4	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5
Other	97.5	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1

34. U.S. export price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1999								2000				
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
0	**Food and live animals**	89.2	89.2	87.4	87.6	86.6	86.4	86.3	85.6	86.3	86.9	87.1	87.8	87.9
01	Meat and meat preparations	89.9	91.5	94.2	97.3	97.5	97.4	97.7	100.9	100.1	98.0	99.4	102.1	105.1
04	Cereals and cereal preparations	76.2	75.9	70.9	73.3	72.7	69.5	70.1	68.5	71.0	74.1	74.4	74.0	75.0
05	Vegetables, fruit, and nuts, prepared fresh or dry	97.6	98.5	99.8	97.8	94.3	96.6	94.3	91.2	90.9	89.0	88.6	90.6	89.0
2	**Crude materials, inedible, except fuels**	74.6	74.9	74.7	76.5	77.7	78.1	77.8	78.9	80.0	82.2	83.2	84.2	85.2
21	Hides, skins, and furskins, raw	79.0	79.0	80.3	83.4	86.5	88.6	87.8	90.5	91.1	89.5	87.7	85.5	86.3
22	Oilseeds and oleaginous fruits	79.5	79.2	72.8	80.1	85.0	82.3	78.1	79.6	80.5	84.8	86.0	88.3	89.1
24	Cork and wood	81.7	82.0	82.9	83.0	82.8	83.5	83.8	85.0	86.4	86.5	87.2	87.4	86.7
25	Pulp and waste paper	62.9	66.0	71.5	73.5	75.2	77.1	78.7	80.9	84.3	88.3	90.0	93.8	99.0
26	Textile fibers and their waste	70.1	68.6	65.2	65.1	64.4	64.5	63.4	62.5	61.2	65.7	68.6	68.9	69.0
27	Crude fertilizers and crude minerals	93.5	93.5	93.6	93.0	93.3	93.1	93.8	94.1	94.3	94.0	93.5	93.0	93.0
28	Metalliferous ores and metal scrap	70.6	70.7	72.3	73.0	73.5	75.1	77.3	78.4	80.0	80.7	80.9	80.4	79.5
3	**Mineral fuels, lubricants, and related products**	100.7	102.0	109.0	113.8	115.3	119.5	121.4	126.6	129.5	138.5	152.1	137.2	142.4
32	Coal, coke, and briquettes	98.4	98.3	98.2	98.3	97.6	97.6	97.6	97.5	96.1	96.1	96.1	94.7	94.7
33	Petroleum, petroleum products, and related materials	105.3	107.6	119.8	126.4	128.6	131.3	133.4	140.1	143.6	159.6	179.2	152.0	163.1
4	**Animal and vegetable oils, fats, and waxes**	81.9	76.6	76.8	77.1	78.8	81.9	79.0	78.0	75.8	74.3	70.8	71.6	70.9
5	**Chemicals and related products, n.e.s.**	90.7	91.2	91.6	91.8	92.3	93.3	93.3	93.6	93.8	94.2	94.4	95.6	95.9
54	Medicinal and pharmaceutical products	100.6	100.6	100.3	99.9	99.8	99.8	99.8	100.3	100.2	100.4	100.4	100.0	100.0
55	Essential oils; polishing and cleaning preparations	101.8	101.9	101.9	101.8	102.1	102.3	103.5	103.4	103.4	103.3	103.0	103.2	103.1
57	Plastics in primary forms (12/92 = 100)	86.6	88.4	89.7	90.6	92.1	94.4	94.9	95.0	94.8	94.8	95.6	97.5	98.1
58	Plastics in nonprimary forms (12/92 = 100)	96.3	97.2	97.4	97.4	97.6	97.9	97.8	98.0	97.8	98.6	100.5	100.6	100.1
59	Chemical materials and products, n.e.s.	99.5	99.6	99.4	99.3	99.2	98.9	98.8	99.1	99.2	99.9	99.6	99.3	98.9
6	**Manufactured goods classified chiefly by materials**	96.6	96.8	97.1	97.3	97.5	97.8	98.0	98.3	98.3	99.0	99.7	99.9	100.0
62	Rubber manufactures, n.e.s.	105.9	105.5	105.6	105.8	106.9	108.2	108.2	108.5	104.7	103.7	103.6	103.7	103.9
64	Paper, paperboard, and articles of paper, pulp, and paperboard	82.9	83.4	84.4	85.4	86.3	87.2	87.6	87.2	87.6	87.8	88.4	89.1	90.6
66	Nonmetallic mineral manufactures, n.e.s.	106.3	106.3	106.3	106.3	106.1	106.0	106.0	105.8	105.8	106.0	106.2	106.4	106.4
68	Nonferrous metals	84.7	85.0	85.3	87.0	88.0	90.2	90.7	92.3	93.4	98.8	101.9	100.3	98.2
7	**Machinery and transport equipment**	97.8	97.6	97.3	97.3	97.2	97.4	97.5	97.2	97.4	97.3	97.3	97.4	97.4
71	Power generating machinery and equipment	109.5	109.6	110.1	110.1	110.1	110.2	111.0	111.0	111.8	111.8	111.8	111.9	112.1
72	Machinery specialized for particular industries	105.9	106.1	105.8	105.8	105.9	106.0	106.1	104.7	106.2	106.3	106.1	106.2	106.2
74	General industrial machines and parts, n.e.s., and machine parts	107.2	107.3	107.5	107.5	107.6	107.7	107.7	107.9	107.5	107.6	108.0	108.2	108.2
75	Computer equipment and office machines	72.2	71.6	71.0	71.0	70.2	70.5	70.4	70.2	70.1	68.7	68.7	68.5	68.4
76	Telecommunications and sound recording and reproducing apparatus and equipment	97.1	96.9	97.0	96.9	96.9	96.6	96.6	96.7	96.4	97.0	96.8	96.7	96.8
77	Electrical machinery and equipment	89.0	88.6	87.7	87.5	87.6	87.4	87.3	86.7	86.4	86.6	86.3	86.4	86.4
78	Road vehicles	102.3	102.5	102.4	102.3	102.4	103.1	103.1	103.1	103.5	103.6	104.0	103.9	103.9
87	**Professional, scientific, and controlling instruments and apparatus**	105.4	105.2	105.4	105.4	105.4	105.5	105.6	105.3	105.2	105.4	105.7	105.8	105.8

35. U.S. import price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

SITC Rev. 3	Industry	1999								2000				
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
0	**Food and live animals**	94.9	93.3	92.6	92.0	91.5	91.0	92.4	94.7	93.7	93.6	93.5	94.3	93.1
01	Meat and meat preparations	93.7	94.5	94.3	96.7	99.4	98.4	97.7	98.4	97.8	98.2	99.1	100.2	100.2
03	Fish and crustaceans, mollusks, and other aquatic invertebrates	106.0	104.3	104.2	103.8	103.1	105.0	107.5	106.8	106.8	107.9	109.7	112.7	112.5
05	Vegetables, fruit, and nuts, prepared fresh or dry	108.1	103.2	103.5	102.6	101.6	96.5	97.2	103.6	102.0	102.1	101.2	100.6	97.0
07	Coffee, tea, cocoa, spices, and manufactures thereof	68.4	69.4	64.3	63.2	61.4	62.0	66.0	70.6	67.2	64.7	61.0	61.1	59.7
1	**Beverages and tobacco**	110.4	110.4	110.6	111.2	112.2	111.5	111.5	112.0	111.2	111.4	111.7	111.9	112.4
11	Beverages	107.2	107.2	107.6	107.7	109.1	108.5	108.5	108.7	107.9	108.2	108.5	108.7	109.4
2	**Crude materials, inedible, except fuels**	88.5	90.3	93.1	92.7	91.7	90.8	90.3	92.2	93.6	94.7	94.3	93.8	91.9
24	Cork and wood	118.3	122.3	131.9	128.9	121.7	116.7	114.9	118.7	117.7	117.0	118.6	117.6	113.0
25	Pulp and waste paper	58.1	60.6	61.4	61.1	66.0	63.9	66.8	68.2	70.5	72.0	72.4	75.1	77.0
28	Metalliferous ores and metal scrap	90.9	91.9	91.9	93.8	94.3	98.4	98.0	99.0	101.4	105.7	104.0	101.7	99.5
29	Crude animal and vegetable materials, n.e.s.	107.8	101.7	102.8	105.0	111.1	112.1	106.5	111.9	121.1	124.3	111.9	110.5	104.7
3	**Mineral fuels, lubricants, and related products**	93.1	92.7	105.3	117.1	126.5	128.0	134.7	141.2	145.2	165.7	165.6	147.8	156.4
33	Petroleum, petroleum products, and related materials	91.1	91.3	103.8	115.9	125.7	127.4	132.6	141.4	146.1	167.9	166.8	146.4	156.7
34	Gas, natural and manufactured	112.1	106.5	123.1	134.1	142.2	141.1	161.5	150.2	147.8	161.4	170.4	171.3	166.8
5	**Chemicals and related products, n.e.s.**	90.6	90.6	90.6	90.4	91.3	91.8	92.1	92.0	92.2	92.7	92.8	93.4	94.8
52	Inorganic chemicals	86.8	86.7	86.4	86.2	86.6	87.2	87.7	88.0	88.3	89.0	88.8	89.8	91.0
53	Dying, tanning, and coloring materials	91.7	91.9	90.6	90.5	90.2	90.6	91.4	89.7	88.9	89.3	88.4	87.9	87.1
54	Medicinal and pharmaceutical products	95.6	96.2	96.2	96.3	97.0	97.4	97.8	97.3	98.2	98.2	97.3	97.3	97.3
55	Essential oils; polishing and cleaning preparations	92.7	92.4	91.7	91.8	92.3	91.8	92.3	90.2	89.6	89.6	89.7	89.4	90.0
57	Plastics in primary forms (12/92 = 100)	93.4	93.6	93.7	93.1	93.8	93.8	93.9	94.0	93.7	93.0	93.9	93.9	93.9
58	Plastics in nonprimary forms (12/92 = 100)	74.0	75.6	75.8	76.1	77.9	78.9	79.4	79.7	79.3	79.0	80.4	80.3	80.8
59	Chemical materials and products, n.e.s.	98.0	97.4	98.0	98.1	98.1	98.6	98.4	99.5	100.0	101.6	100.6	100.0	101.3
6	**Manufactured goods classified chiefly by materials**	91.8	92.0	91.9	92.4	92.6	93.3	93.9	93.9	94.5	95.5	97.9	97.6	97.1
62	Rubber manufactures, n.e.s.	94.7	94.3	94.4	94.5	95.0	94.9	94.4	94.4	92.7	92.8	92.3	92.4	92.5
64	Paper, paperboard, and articles of paper, pulp, and paperboard	85.2	83.7	83.6	83.5	83.7	84.4	87.4	86.2	86.6	86.9	87.1	88.8	89.7
66	Nonmetallic mineral manufactures, n.e.s.	100.8	100.9	100.8	100.9	101.1	101.2	101.6	101.2	100.8	101.2	100.8	100.9	100.8
68	Nonferrous metals	85.8	87.7	87.6	89.9	91.1	94.8	95.4	95.6	98.9	104.4	114.8	110.1	106.6
69	Manufactures of metals, n.e.s.	96.4	96.1	95.8	95.6	95.8	95.6	95.9	95.9	95.7	96.1	96.1	96.3	96.3
7	**Machinery and transport equipment**	90.6	90.3	89.9	89.9	89.9	89.9	89.8	89.7	89.8	89.8	89.7	89.6	89.6
72	Machinery specialized for particular industries	97.8	97.6	97.3	97.2	97.6	97.8	98.2	97.8	97.7	97.9	97.3	97.1	97.0
74	General industrial machines and parts, n.e.s., and machine parts	97.7	97.6	97.3	97.3	97.4	97.3	97.3	97.0	97.0	96.7	97.0	96.9	96.7
75	Computer equipment and office machines	63.6	63.1	62.0	61.8	61.6	61.4	61.4	61.7	61.5	61.4	61.0	60.5	60.2
76	Telecommunications and sound recording and reproducing apparatus and equipment	87.8	87.6	87.3	87.0	87.1	86.0	85.9	85.6	85.2	85.2	84.9	84.6	84.5
77	Electrical machinery and equipment	83.3	82.7	81.9	82.1	82.5	82.6	82.2	82.1	82.4	82.2	82.2	82.5	83.0
78	Road vehicles	102.3	102.3	102.4	102.4	102.2	102.4	102.4	102.3	102.4	102.6	102.7	102.7	102.8
85	Footwear	100.5	100.7	100.7	100.6	100.8	100.8	100.8	100.8	100.8	100.9	100.7	100.5	100.7
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	91.4	91.3	91.2	91.1	91.4	92.2	92.5	92.5	92.2	91.7	91.8	91.7	91.8

36. U.S. export price indexes by end-use category

[1995 = 100]

Category	1999								2000				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
ALL COMMODITIES	94.5	94.5	94.4	94.7	94.8	95.1	95.3	95.2	95.4	95.8	96.3	96.2	96.4
Foods, feeds, and beverages	89.0	88.9	86.7	87.9	87.6	87.4	86.7	86.0	86.3	87.2	87.4	88.1	88.0
Agricultural foods, feeds, and beverages	86.8	86.8	85.0	86.9	86.7	86.4	85.6	84.9	85.4	86.0	86.2	87.0	87.3
Nonagricultural (fish, beverages) food products	114.2	113.1	106.8	99.5	98.2	99.7	99.2	99.5	98.3	100.9	101.4	100.6	96.6
Industrial supplies and materials	87.2	87.5	88.3	89.0	89.5	90.4	91.1	91.7	92.1	93.6	95.2	94.5	95.2
Agricultural industrial supplies and materials	79.5	78.4	76.2	76.3	76.6	77.5	76.6	76.7	75.2	76.9	77.7	78.0	78.0
Fuels and lubricants	98.4	99.8	106.1	110.5	111.8	114.4	115.9	120.4	122.7	131.3	143.6	127.5	132.8
Nonagricultural supplies and materials, excluding fuel and building materials	85.7	86.0	86.6	87.0	87.5	88.3	89.1	89.3	89.7	90.4	91.0	91.8	92.2
Selected building materials	87.5	87.8	88.0	88.4	87.4	87.8	87.7	88.6	89.2	89.5	90.1	90.4	89.9
Capital goods	96.7	96.5	96.2	96.2	96.1	96.2	96.3	96.0	96.1	96.0	96.0	96.1	96.1
Electric and electrical generating equipment	98.9	99.0	98.2	98.0	98.3	98.3	98.4	98.5	98.3	98.8	98.7	98.7	98.8
Nonelectrical machinery	93.2	92.9	92.6	92.6	92.4	92.4	92.5	92.1	92.1	91.9	91.9	91.9	91.9
Automotive vehicles, parts, and engines	103.0	103.2	103.2	103.2	103.3	104.0	103.9	103.8	103.9	103.8	104.2	104.2	104.2
Consumer goods, excluding automotive	101.8	102.0	101.9	102.0	101.9	102.2	102.2	102.4	102.4	102.5	102.4	102.3	102.3
Nondurables, manufactured	102.0	102.1	102.0	102.0	102.1	102.4	102.5	102.9	102.8	102.6	102.5	102.3	102.4
Durables, manufactured	100.3	100.5	100.6	100.8	100.7	100.8	100.9	100.8	101.0	101.4	101.0	101.2	101.2
Agricultural commodities	85.2	85.0	83.1	84.7	84.6	84.5	83.7	83.1	83.2	84.0	84.4	85.1	85.3
Nonagricultural commodities	95.5	95.6	95.7	95.8	95.9	96.3	96.6	96.6	96.8	97.2	97.6	97.5	97.6

37. U.S. import price indexes by end-use category

[1995 = 100]

Category	1999								2000				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
ALL COMMODITIES	92.5	92.4	93.3	94.3	95.2	95.4	96.2	96.8	97.2	99.2	99.3	97.8	98.4
Foods, feeds, and beverages	94.8	93.7	92.8	92.5	92.3	91.6	93.0	94.8	93.6	93.3	92.9	93.7	92.6
Agricultural foods, feeds, and beverages	90.3	89.3	88.0	87.7	87.6	86.1	87.2	89.8	88.4	87.6	86.5	86.7	85.2
Nonagricultural (fish, beverages) food products	106.5	105.2	105.4	105.0	104.9	106.3	108.2	107.7	107.2	108.1	109.7	112.1	112.1
Industrial supplies and materials	91.5	91.8	96.1	99.9	103.1	104.3	106.9	109.4	111.0	118.6	119.8	114.1	116.7
Fuels and lubricants	93.4	93.2	105.4	116.7	126.0	128.1	134.3	140.7	144.2	164.7	163.9	147.0	155.3
Petroleum and petroleum products	90.8	91.2	103.5	115.6	125.2	127.3	132.5	140.9	145.8	167.5	166.4	146.7	156.3
Paper and paper base stocks	77.7	77.0	77.0	76.9	78.4	78.5	81.8	81.2	82.1	82.8	83.1	85.6	86.9
Materials associated with nondurable supplies and materials	87.3	87.4	87.0	86.9	87.7	88.3	88.8	89.1	89.2	89.7	90.4	91.2	92.5
Selected building materials	110.5	114.2	120.6	118.9	113.4	110.0	108.3	111.1	110.5	110.1	112.1	111.9	109.2
Unfinished metals associated with durable goods	87.3	88.3	87.7	89.0	89.7	93.0	94.4	94.8	97.4	100.3	106.9	104.2	102.0
Nonmetals associated with durable goods	87.3	87.0	86.7	86.7	87.3	87.5	87.5	87.4	87.2	88.0	87.6	87.8	88.5
Capital goods	83.0	82.6	81.9	81.9	82.0	81.9	81.8	81.7	81.7	81.6	81.3	81.2	81.0
Electric and electrical generating equipment	92.3	91.5	91.1	91.2	91.6	91.7	91.8	91.1	91.8	91.8	92.1	92.2	92.4
Nonelectrical machinery	79.9	79.5	78.7	78.7	78.8	78.6	78.5	78.4	78.3	78.2	77.9	77.7	77.5
Automotive vehicles, parts, and engines	101.8	101.7	101.8	101.9	101.9	102.0	102.0	102.0	102.1	102.2	102.2	102.3	102.6
Consumer goods, excluding automotive	97.6	97.5	97.4	97.4	97.7	97.5	97.6	97.5	97.5	97.4	97.1	97.1	96.9
Nondurables, manufactured	100.5	100.4	100.2	100.3	100.8	100.5	100.7	100.6	100.4	100.4	100.3	100.2	100.1
Durables, manufactured	94.5	94.4	94.3	94.1	94.2	94.1	94.2	94.1	94.1	93.8	93.5	93.4	93.3
Nonmanufactured consumer goods	98.8	98.0	98.3	99.1	99.9	100.0	98.8	99.8	101.5	102.0	100.1	100.4	99.3

38. U.S. international price indexes for selected categories of services

[1990 = 100, unless otherwise indicated]

Category	1998			1999				2000
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
Air freight (inbound) (9/90 = 100)	83.4	81.8	87.4	88.0	86.2	87.9	90.7	88.9
Air freight (outbound) (9/92 = 100)	96.0	95.8	95.2	92.7	92.8	92.7	91.7	91.7
Air passenger fares (U.S. carriers)	107.8	107.3	103.1	104.5	112.3	114.2	106.8	107.3
Air passenger fares (foreign carriers)	102.4	104.0	101.1	98.9	106.3	108.6	102.2	102.6
Ocean liner freight (inbound)	103.2	105.0	104.2	102.6	133.7	148.0	139.4	136.3

39. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	Quarterly indexes												
	1997				1998				1999				2000
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
Business													
Output per hour of all persons	106.2	107.0	107.9	108.3	109.6	109.8	110.7	111.9	112.7	112.9	114.2	116.1	116.6
Compensation per hour	112.5	113.2	114.6	116.5	117.9	119.5	121.3	122.8	124.3	125.8	127.2	128.2	129.4
Real compensation per hour	100.2	100.6	101.4	102.5	103.6	104.6	105.8	106.7	107.5	108.0	108.5	108.6	108.6
Unit labor costs	105.9	105.8	106.1	107.6	107.6	108.9	109.6	109.7	110.3	111.4	111.4	110.5	111.0
Unit nonlabor payments	114.6	116.0	116.2	114.3	114.4	112.7	112.2	112.1	112.2	111.0	111.6	114.4	115.2
Implicit price deflator	109.1	109.6	109.8	110.0	110.1	110.3	110.5	110.6	111.0	111.3	111.5	111.9	112.5
Nonfarm business													
Output per hour of all persons	106.0	106.8	107.7	108.0	109.2	109.5	110.4	111.5	112.2	112.4	113.7	115.6	116.3
Compensation per hour	112.1	112.9	114.1	115.9	117.3	118.9	120.7	122.1	123.3	124.8	126.2	127.4	128.7
Real compensation per hour	99.9	100.3	100.9	102.0	103.1	104.1	105.3	106.1	106.7	107.1	107.7	107.9	108.0
Unit labor costs	105.8	105.7	106.0	107.3	107.4	108.6	109.4	109.5	109.9	111.1	111.0	110.2	110.6
Unit nonlabor payments	115.0	116.7	117.1	115.4	115.9	114.2	113.2	112.7	113.2	112.3	113.0	115.8	116.9
Implicit price deflator	109.1	109.7	110.0	110.3	110.5	110.6	110.8	110.7	111.1	111.5	111.7	112.2	112.9
Nonfinancial corporations													
Output per hour of all employees	109.4	110.0	111.7	112.4	113.4	114.5	116.2	117.1	118.3	119.3	120.4	122.0	123.0
Compensation per hour	111.2	112.0	113.3	115.1	116.4	118.1	119.9	121.3	122.7	124.2	125.6	126.7	127.7
Real compensation per hour	99.1	99.5	100.2	101.3	102.3	103.4	104.6	105.4	106.2	106.6	107.1	107.3	107.2
Total unit costs	101.3	101.4	101.0	101.5	101.5	101.9	101.9	102.5	102.3	102.7	103.0	102.9	102.9
Unit labor costs	101.7	101.8	101.4	102.4	102.6	103.1	103.2	103.6	103.8	104.1	104.2	103.9	103.8
Unit nonlabor costs	100.1	100.3	99.7	99.1	98.6	98.7	98.4	99.4	98.4	98.9	99.8	100.5	100.5
Unit profits	156.3	156.9	161.8	156.1	154.1	150.8	153.8	147.1	151.3	150.2	146.5	150.2	155.3
Unit nonlabor payments	114.4	114.7	115.6	113.6	112.7	112.0	112.5	111.6	111.9	112.0	111.7	113.2	114.5
Implicit price deflator	105.9	106.1	106.1	106.1	106.0	106.0	106.3	106.3	106.5	106.7	106.7	107.0	107.4
Manufacturing													
Output per hour of all persons	116.8	118.3	120.9	122.2	123.2	124.5	127.0	128.9	131.1	132.8	134.3	137.7	140.2
Compensation per hour	111.7	112.5	113.6	115.7	117.4	119.2	121.3	122.1	123.4	125.1	126.9	128.3	129.4
Real compensation per hour	99.5	100.0	100.5	101.8	103.2	104.3	105.8	106.1	106.8	107.5	108.3	108.7	108.6
Unit labor costs	95.7	95.1	94.0	94.6	95.3	95.7	95.5	94.8	94.1	94.2	94.5	93.1	92.3

40. Annual indexes of multifactor productivity and related measures, selected years

[1992 = 100]

Item	1960	1970	1980	1989	1990	1991	1993	1994	1995	1996	1997
Private business											
Productivity:											
Output per hour of all persons	50.8	70.1	83.8	95.5	96.1	96.7	100.1	100.6	101.0	103.7	105.2
Output per unit of capital services	117.3	117.1	107.3	103.8	102.1	98.6	100.7	102.3	101.9	102.3	102.6
Multifactor productivity	70.7	86.5	95.3	100.0	99.6	98.1	100.1	100.6	100.7	102.4	103.1
Output	34.0	51.6	72.6	97.8	98.6	96.9	102.7	107.0	110.0	114.7	120.1
Inputs:											
Labor input	66.9	73.7	86.6	102.4	102.6	100.2	102.7	106.4	108.9	110.6	114.1
Capital services	29.0	44.1	67.7	94.2	96.5	98.3	102.0	104.6	108.0	112.2	117.1
Combined units of labor and capital input	48.1	59.7	76.2	97.8	99.0	98.7	102.6	106.3	109.3	112.1	116.5
Capital per hour of all persons	43.3	59.9	78.1	92.0	94.1	98.1	99.4	98.3	99.2	101.4	102.6
Private nonfarm business											
Productivity:											
Output per hour of all persons	54.3	72.2	85.6	95.9	96.3	96.9	100.1	100.6	101.2	103.7	104.9
Output per unit of capital services	126.1	124.1	111.4	104.6	102.6	98.8	100.8	102.1	101.8	102.1	102.1
Multifactor productivity	74.9	89.4	97.6	100.5	99.8	98.4	100.1	100.5	100.8	102.3	102.7
Output	33.7	51.8	73.1	98.1	98.8	97.0	103.0	107.1	110.4	115.0	120.2
Inputs:											
Labor input	62.1	71.7	85.4	102.4	102.6	100.1	102.9	106.5	109.0	110.9	114.6
Capital services	26.7	41.8	65.6	93.9	96.3	98.2	102.2	104.8	108.4	112.6	117.7
Combined units of labor and capital input	45.0	58.0	74.9	97.7	99.0	98.6	102.9	106.5	109.5	112.4	117.0
Capital per hour of all persons	43.0	58.2	76.8	91.7	93.8	98.1	99.3	98.5	99.4	101.6	102.8
Manufacturing											
Productivity:											
Output per hour of all persons	42.1	54.5	70.4	90.7	93.0	95.1	102.2	105.3	109.4	113.8	–
Output per unit of capital services	125.6	116.3	101.5	103.5	101.3	97.3	101.8	105.2	106.8	107.0	–
Multifactor productivity	72.9	84.2	87.3	100.4	99.8	98.6	101.2	104.4	108.4	110.7	–
Output	38.7	56.8	75.7	97.1	97.5	95.5	103.6	109.1	113.8	118.0	–
Inputs:											
Hours of all persons	92.0	104.2	107.5	107.1	104.8	100.4	101.4	103.6	104.0	103.7	–
Capital services	30.9	48.8	74.6	93.8	96.3	98.2	101.7	103.6	106.6	110.3	–
Energy	51.5	85.4	92.5	96.8	99.9	100.1	103.7	107.3	109.5	107.0	–
Nonenergy materials	39.1	46.0	74.5	88.3	91.3	93.1	103.0	104.4	101.4	105.4	–
Purchased business services	27.3	47.4	71.9	88.9	91.8	91.9	104.3	107.8	111.0	111.6	–
Combined units of all factor inputs	53.1	67.4	86.7	96.7	97.7	96.9	102.3	104.5	105.0	106.6	–

– Data not available.

41. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1980	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999
Business													
Output per hour of all persons	48.0	66.2	79.8	93.3	94.5	95.9	100.1	101.4	102.2	105.2	107.5	110.5	114.0
Compensation per hour	13.6	23.5	54.3	85.7	90.6	94.9	102.4	104.5	106.7	110.1	114.2	120.3	126.3
Real compensation per hour	59.9	79.0	89.7	95.8	96.4	97.4	99.9	99.7	99.1	99.6	101.1	105.1	108.1
Unit labor costs	28.4	35.6	68.1	91.9	95.9	99.0	102.3	103.0	104.4	104.7	106.2	108.8	110.8
Unit nonlabor payments	25.5	32.0	62.1	92.5	94.6	97.4	102.9	106.9	109.8	113.5	115.1	112.7	112.2
Implicit price deflator	27.3	34.3	65.9	92.1	95.4	98.4	102.5	104.4	106.4	107.9	109.5	110.3	111.3
Nonfarm business													
Output per hour of all persons	51.2	68.0	81.3	93.5	94.6	96.1	100.1	101.4	102.4	105.2	107.2	110.2	113.5
Compensation per hour	14.3	23.7	54.7	85.8	90.5	94.9	102.1	104.3	106.5	109.8	113.8	119.7	125.4
Real compensation per hour	62.8	79.7	90.3	95.8	96.3	97.4	99.6	99.5	98.9	99.3	100.7	104.5	107.2
Unit labor costs	27.9	34.9	67.2	91.7	95.7	98.8	102.1	102.9	104.0	104.4	106.1	108.6	110.5
Unit nonlabor payments	24.9	31.7	61.1	91.9	94.2	97.5	103.4	107.4	110.8	113.8	115.9	113.9	113.4
Implicit price deflator	26.8	33.7	65.0	91.8	95.1	98.3	102.6	104.5	106.5	107.8	109.7	110.5	111.5
Nonfinancial corporations													
Output per hour of all employees	52.6	66.3	76.9	93.8	94.9	96.9	101.5	104.3	105.6	108.4	111.7	116.2	–
Compensation per hour	15.6	25.3	56.6	87.0	91.4	95.5	102.1	104.3	106.2	109.0	113.0	119.0	–
Real compensation per hour	68.6	85.1	93.6	97.2	97.2	98.0	99.5	99.5	98.6	98.6	100.0	103.9	–
Total unit costs	28.9	37.4	72.5	93.6	97.1	99.8	100.3	100.0	100.6	100.4	100.6	101.3	–
Unit labor costs	29.7	38.2	73.7	92.7	96.4	98.6	100.6	100.0	100.5	100.5	101.1	102.4	–
Unit nonlabor costs	26.8	35.4	69.4	95.9	99.0	102.9	99.6	100.2	100.9	100.1	99.4	98.4	–
Unit profits	53.2	47.1	72.6	99.0	95.5	94.0	112.5	130.5	137.5	151.5	157.1	150.4	–
Unit nonlabor payments	33.2	38.3	70.2	96.6	98.1	100.7	102.7	107.6	109.8	112.6	113.4	111.0	–
Implicit price deflator	30.9	38.2	72.5	94.1	97.0	99.3	101.3	102.6	103.7	104.7	105.3	105.3	–
Manufacturing													
Output per hour of all persons	42.1	54.4	70.4	90.7	93.0	95.1	102.2	105.3	109.4	113.8	119.6	125.3	133.3
Compensation per hour	14.9	23.7	55.6	86.6	90.8	95.6	102.7	105.6	107.9	109.3	113.4	119.4	125.3
Real compensation per hour	65.4	79.7	91.8	96.8	96.6	98.0	100.2	100.8	100.2	98.9	100.4	104.3	107.2
Unit labor costs	35.3	43.6	78.9	95.5	97.6	100.4	100.5	100.3	98.6	96.0	94.8	95.3	94.0
Unit nonlabor payments	26.7	29.4	79.9	95.2	99.6	98.9	101.1	102.9	107.2	110.2	–	–	–
Implicit price deflator	30.1	34.9	79.5	95.3	98.8	99.5	100.9	101.9	103.9	104.7	–	–	–

– Data not available.

42. Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mining												
Copper ores	102	109.2	106.6	102.7	100.5	115.2	118.1	126.0	117.2	116.5	118.9	117.5
Gold and silver ores	104	101.5	113.3	122.3	127.4	141.6	159.8	160.8	144.2	138.3	159.0	186.3
Bituminous coal and lignite mining	122	111.7	117.3	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	187.3
Crude petroleum and natural gas	131	101.0	98.0	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	128.7
Crushed and broken stone	142	101.3	98.7	102.2	99.8	105.0	103.6	108.7	105.4	107.2	114.0	111.9
Manufacturing												
Meat products	201	100.1	99.2	97.1	99.6	104.6	104.3	101.2	102.3	97.4	103.2	-
Dairy products	202	108.4	107.7	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.5	-
Preserved fruits and vegetables	203	97.0	97.8	95.6	99.2	100.5	106.8	107.6	109.1	109.2	111.8	-
Grain mill products	204	101.3	107.6	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.7	-
Bakery products	205	96.8	96.1	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.3	-
Sugar and confectionery products	206	99.5	101.8	103.2	102.0	99.8	104.5	106.2	108.3	113.8	117.1	-
Fats and oils	207	108.9	116.4	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.0	-
Beverages	208	106.0	112.7	117.7	120.5	127.6	127.0	130.8	134.3	135.7	136.3	-
Miscellaneous food and kindred products	209	107.0	99.3	99.3	101.6	101.6	105.3	101.0	103.1	109.2	103.9	-
Cigarettes	211	101.2	109.0	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	-
Broadwoven fabric mills, cotton	221	99.6	99.8	103.1	111.2	110.3	117.8	122.1	134.0	137.3	130.9	-
Broadwoven fabric mills, manmade	222	99.2	106.3	111.3	116.2	126.2	131.7	142.5	145.3	147.6	161.9	-
Narrow fabric mills	224	108.4	92.7	96.5	99.6	112.9	111.4	120.1	118.9	126.3	107.7	-
Knitting mills	225	96.3	108.0	107.5	114.1	119.5	128.1	134.3	138.6	150.5	150.2	-
Textile finishing, except wool	226	90.3	88.7	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.0	-
Carpets and rugs	227	98.6	97.8	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	-
Yarn and thread mills	228	102.1	104.2	110.2	111.4	119.6	126.6	130.7	137.4	147.4	155.5	-
Miscellaneous textile goods	229	101.6	109.1	109.2	104.6	106.5	110.4	118.5	123.7	123.1	117.9	-
Men's and boys' suits and coats	231	105.1	97.7	93.9	90.2	89.0	97.4	97.7	92.5	97.4	130.3	-
Men's and boys' furnishings	232	100.1	100.1	102.1	108.4	109.1	108.4	111.7	123.4	134.7	152.4	-
Women's and misses' outerwear	233	101.4	96.8	104.1	104.3	109.4	121.8	127.4	135.5	141.6	151.5	-
Women's and children's undergarments	234	105.4	94.6	102.1	113.6	117.4	124.5	138.0	161.3	174.5	196.3	-
Hats, caps, and millinery	235	99.0	96.4	89.2	91.1	93.6	87.2	77.7	84.3	82.2	83.5	-
Miscellaneous apparel and accessories	238	101.3	88.4	90.6	91.8	91.3	94.0	105.5	116.8	120.1	105.2	-
Miscellaneous fabricated textile products	239	96.6	95.7	99.9	100.7	107.5	108.5	107.8	109.2	105.6	117.0	-
Logging	241	93.7	89.4	86.3	86.0	96.2	88.6	87.8	86.0	85.4	71.9	-
Sawmills and planing mills	242	100.7	99.6	99.8	102.6	108.1	101.9	103.3	110.2	115.6	117.5	-
Millwork, plywood, and structural members	243	98.8	97.1	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.9	-
Wood containers	244	103.1	108.8	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.6	-
Wood buildings and mobile homes	245	97.8	98.8	103.1	103.0	103.1	103.8	98.3	97.0	96.7	101.1	-
Miscellaneous wood products	249	95.9	102.4	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.1	-
Household furniture	251	99.4	102.0	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.8	-
Office furniture	252	94.3	97.5	95.0	94.1	102.5	103.2	100.5	101.1	106.4	117.9	-
Public building and related furniture	253	109.6	113.7	119.8	120.2	140.6	161.0	157.4	173.3	181.5	186.5	-
Partitions and fixtures	254	95.7	92.4	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.4	-
Miscellaneous furniture and fixtures	259	103.6	101.9	103.5	102.1	99.5	103.6	104.7	110.0	113.2	102.2	-
Pulp mills	261	99.6	107.4	116.7	128.3	137.3	122.5	128.9	131.9	132.6	104.4	-
Paper mills	262	103.9	103.6	102.3	99.2	103.3	102.4	110.2	118.6	111.6	107.0	-
Paperboard mills	263	105.5	101.9	100.6	101.4	104.4	108.4	114.9	119.5	118.0	124.2	-
Paperboard containers and boxes	265	99.7	101.5	101.3	103.4	105.2	107.9	108.4	105.1	106.3	110.1	-
Miscellaneous converted paper products	267	101.1	101.6	101.4	105.3	105.5	107.9	110.6	113.3	113.6	121.7	-
Newspapers	271	96.9	95.2	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	-
Periodicals	272	97.9	98.3	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	-
Books	273	99.1	94.1	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.2	-
Miscellaneous publishing	274	96.7	89.0	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	-
Commercial printing	275	100.0	101.1	102.5	102.0	108.0	106.9	106.5	107.2	108.3	109.2	-
Manifold business forms	276	98.7	89.7	93.0	89.1	94.5	91.1	82.0	76.9	75.2	78.9	-
Greeting cards	277	100.1	109.1	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	-
Blankbooks and bookbinding	278	95.6	94.2	99.4	96.1	103.6	98.7	105.4	108.7	114.5	115.3	-
Printing trade services	279	99.9	94.3	99.3	100.6	112.0	115.3	111.0	116.7	126.2	124.2	-
Industrial inorganic chemicals	281	105.7	104.3	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.1	-
Plastics materials and synthetics	282	98.8	99.7	100.9	100.0	107.5	112.0	125.3	128.3	125.3	133.8	-
Drugs	283	101.0	102.8	103.8	104.5	99.5	99.9	104.9	108.7	112.1	112.6	-
Soaps, cleaners, and toilet goods	284	102.0	100.6	103.8	105.3	104.4	108.7	111.2	118.6	120.9	130.4	-
Paints and allied products	285	101.4	103.3	106.3	104.3	102.9	108.8	116.7	118.0	125.6	127.2	-

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Industrial organic chemicals	286	109.9	110.4	101.4	95.8	94.6	92.2	99.9	98.6	99.0	112.9	-
Agricultural chemicals	287	103.7	104.3	104.7	99.5	99.5	103.8	105.0	108.5	110.0	120.4	-
Miscellaneous chemical products	289	95.4	95.2	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.2	-
Petroleum refining	291	105.3	109.6	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	-
Asphalt paving and roofing materials	295	98.3	95.3	98.0	94.1	100.4	108.0	104.9	111.2	113.1	120.8	-
Miscellaneous petroleum and coal products	299	98.4	101.9	94.8	90.6	101.5	104.2	96.3	87.4	87.1	97.2	-
Tires and inner tubes	301	102.9	103.8	103.0	102.4	107.8	116.5	124.1	131.1	138.8	148.5	-
Hose and belting and gaskets and packing	305	103.7	96.3	96.1	92.4	97.8	99.7	102.7	104.6	107.4	112.5	-
Fabricated rubber products, n.e.c.	306	104.2	105.5	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.4	-
Miscellaneous plastics products, n.e.c.	308	100.5	101.8	105.7	108.2	114.4	116.7	120.7	120.9	124.7	130.1	-
Footwear, except rubber	314	101.3	101.1	101.1	94.4	104.2	105.2	113.0	117.1	126.1	129.5	-
Luggage	316	93.7	104.8	106.2	100.3	90.7	89.5	92.3	90.5	110.6	136.4	-
Handbags and personal leather goods	317	98.5	93.1	96.5	98.7	111.2	97.8	86.8	81.8	83.2	109.7	-
Flat glass	321	91.9	90.7	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	-
Glass and glassware, pressed or blown	322	100.6	100.2	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.2	-
Products of purchased glass	323	95.9	90.1	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.3	-
Cement, hydraulic	324	103.2	110.2	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	-
Structural clay products	325	98.8	103.1	109.6	109.8	111.4	106.8	114.0	112.6	119.6	116.1	-
Pottery and related products	326	99.6	97.1	98.6	95.8	99.5	100.3	108.4	109.3	119.3	116.1	-
Concrete, gypsum, and plaster products	327	100.8	102.4	102.3	101.2	102.5	104.6	101.5	104.5	107.3	109.2	-
Miscellaneous nonmetallic mineral products	329	103.0	95.5	95.4	94.0	104.3	104.5	106.3	107.8	110.4	112.7	-
Blast furnace and basic steel products	331	112.6	108.0	109.6	107.8	117.1	133.5	142.4	142.7	155.1	160.9	-
Iron and steel foundries	332	104.0	105.4	106.1	104.5	107.2	112.1	113.0	112.7	116.2	121.7	-
Primary nonferrous metals	333	107.8	106.1	102.3	110.7	101.9	107.9	105.3	111.0	110.8	116.0	-
Nonferrous rolling and drawing	335	95.5	93.6	92.7	91.0	96.0	98.3	101.2	99.2	104.0	112.3	-
Nonferrous foundries (castings)	336	102.6	105.1	104.0	103.6	103.6	108.5	112.1	117.8	122.3	126.4	-
Miscellaneous primary metal products	339	106.6	105.0	113.7	109.1	114.5	111.3	134.5	152.2	149.6	140.9	-
Metal cans and shipping containers	341	106.5	108.5	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.8	-
Cutlery, handtools, and hardware	342	97.8	101.7	97.3	96.8	100.1	104.0	109.2	111.3	118.2	113.1	-
Plumbing and heating, except electric	343	103.7	101.5	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.2	-
Fabricated structural metal products	344	100.4	96.9	98.8	100.0	103.9	104.8	107.7	105.8	106.5	110.0	-
Screw machine products, bolts, etc.	345	98.5	96.1	96.1	97.9	102.3	104.4	107.2	109.7	110.2	151.3	-
Metal forgings and stampings	346	101.5	99.8	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	-
Metal services, n.e.c.	347	108.3	102.4	104.7	99.4	111.6	120.6	123.0	127.7	128.4	123.5	-
Ordnance and accessories, n.e.c.	348	97.7	89.8	82.1	81.5	88.6	84.6	83.6	87.6	87.5	100.5	-
Miscellaneous fabricated metal products	349	101.4	95.9	97.5	97.4	101.1	102.0	103.2	106.6	108.3	106.2	-
Engines and turbines	351	106.8	110.7	106.5	105.8	103.3	109.2	122.3	122.7	136.6	134.2	-
Farm and garden machinery	352	106.3	110.7	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.0	-
Construction and related machinery	353	106.5	108.3	107.0	99.1	102.0	108.2	117.7	122.1	123.3	131.8	-
Metalworking machinery	354	101.0	103.5	101.1	96.4	104.3	107.4	109.9	114.8	114.9	118.6	-
Special industry machinery	355	104.6	108.3	107.5	108.3	106.0	113.6	121.2	132.3	134.0	130.1	-
General industrial machinery	356	105.9	101.5	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.1	-
Refrigeration and service machinery	358	102.1	106.0	103.6	100.7	104.9	108.6	110.7	112.7	114.7	114.8	-
Industrial machinery, n.e.c.	359	106.5	107.1	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.7	-
Electric distribution equipment	361	105.4	105.0	106.3	106.5	119.6	122.2	131.8	143.0	143.9	143.9	-
Electrical industrial apparatus	362	104.6	107.4	107.7	107.1	117.1	132.9	134.9	150.8	154.3	163.9	-
Household appliances	363	103.0	104.7	105.8	106.5	115.0	123.4	131.4	127.3	127.4	138.1	-
Electric lighting and wiring equipment	364	101.9	100.2	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.4	-
Communications equipment	366	110.5	107.2	121.4	124.5	146.7	150.3	166.0	170.9	190.3	221.0	-
Miscellaneous electrical equipment & supplies	369	102.8	99.6	90.6	98.6	101.3	108.2	110.5	114.1	123.1	124.6	-
Motor vehicles and equipment	371	103.2	103.3	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.5	-
Aircraft and parts	372	100.6	98.2	98.9	108.2	112.4	115.2	109.6	107.8	113.0	114.0	-
Ship and boat building and repairing	373	99.4	97.6	103.7	96.3	102.7	106.2	103.8	98.0	99.2	104.3	-
Railroad equipment	374	113.5	135.3	141.1	146.9	147.9	151.0	152.5	150.0	148.3	183.2	-
Motorcycles, bicycles, and parts	375	92.6	94.6	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.5	-
Guided missiles, space vehicles, parts	376	104.1	110.6	116.5	110.5	110.5	122.1	118.9	121.0	129.4	126.6	-
Search and navigation equipment	381	104.8	105.8	112.7	118.9	122.1	129.1	132.1	149.5	142.2	148.9	-
Measuring and controlling devices	382	103.9	102.1	107.0	113.9	121.0	125.2	135.0	147.8	151.9	144.3	-
Medical instruments and supplies	384	105.2	107.9	116.9	118.7	123.5	127.3	126.7	131.5	139.8	146.3	-
Ophthalmic goods	385	112.6	123.3	121.2	125.1	144.5	157.8	160.6	167.2	188.2	202.6	-
Photographic equipment & supplies	386	105.6	113.0	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.6	-

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Jewelry, silverware, and plated ware	391	100.1	102.9	99.3	95.8	96.7	96.7	99.5	100.2	102.6	117.2	-
Musical instruments	393	101.8	96.1	97.1	96.9	96.0	95.6	88.7	86.9	78.8	83.9	-
Toys and sporting goods	394	104.8	106.0	108.1	109.7	104.9	114.2	109.7	113.6	119.9	139.6	-
Pens, pencils, office, and art supplies	395	108.3	112.9	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.7	-
Costume jewelry and notions	396	102.0	93.8	105.3	106.7	110.8	115.8	129.0	143.7	142.2	119.1	-
Miscellaneous manufactures	399	102.1	100.9	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.3	-
Transportation												
Trucking, except local [1]	4213	105.2	109.3	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	130.1
U.S. postal service [2]	431	99.9	99.7	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.5
Air transportation [1]	4512,13,22 (pts.)	99.5	95.8	92.9	92.5	96.9	100.2	105.7	108.6	111.6	111.1	108.5
Utilities												
Telephone communications	481	106.2	111.6	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	171.2
Radio and television broadcasting	483	103.1	106.2	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.1	100.8
Cable and other pay TV services	484	102.0	99.7	92.5	87.5	88.3	86.7	85.6	86.7	84.4	87.6	88.0
Electric utilities	491,3 (pt.)	104.9	107.7	110.1	113.4	115.2	120.6	126.8	135.0	150.5	146.5	157.2
Gas utilities	492,3 (pt.)	108.3	111.2	105.8	109.6	111.1	121.8	125.6	137.1	158.6	145.9	153.4
Trade												
Lumber and other building materials dealers	521	101.0	99.1	103.6	101.3	105.4	110.5	118.3	117.6	121.7	122.2	133.0
Paint, glass, and wallpaper stores	523	102.8	101.7	106.0	99.4	106.5	114.7	130.2	135.3	140.2	143.8	166.0
Hardware stores	525	108.6	115.2	110.5	102.5	107.2	105.8	112.7	108.5	112.1	111.2	125.3
Retail nurseries, lawn and garden supply stores	526	106.7	103.4	83.9	88.5	100.4	106.6	116.6	117.2	136.6	128.1	136.1
Department stores	531	99.2	97.0	94.2	98.2	100.9	105.7	108.6	110.9	118.4	123.5	129.4
Variety stores	533	101.9	124.4	151.2	154.2	167.7	184.7	190.1	203.2	229.2	247.6	262.5
Miscellaneous general merchandise stores	539	100.8	109.8	116.4	121.8	136.1	159.7	160.9	163.9	164.9	168.2	189.9
Grocery stores	541	98.9	95.4	94.6	93.7	93.3	92.8	92.5	91.2	89.4	89.2	90.2
Meat and fish (seafood) markets	542	99.0	97.6	96.8	88.4	95.8	93.7	91.1	89.1	81.1	84.7	89.9
Retail bakeries	546	89.8	83.3	89.7	94.7	94.0	86.5	87.2	86.8	81.7	75.4	65.0
New and used car dealers	551	103.4	102.5	106.1	104.1	106.5	107.6	108.7	107.1	108.2	107.8	108.0
Auto and home supply stores	553	103.2	101.6	102.7	99.0	100.0	98.7	102.6	105.7	104.6	104.2	107.0
Gasoline service stations	554	103.0	105.2	102.6	104.3	109.7	115.2	120.4	126.3	125.1	125.0	130.6
Men's and boys' wear stores	561	106.0	109.6	113.7	119.2	118.2	115.5	117.9	117.5	125.7	132.2	145.5
Women's clothing stores	562	97.8	99.5	101.5	103.0	112.2	118.4	119.3	128.5	142.3	145.8	154.8
Family clothing stores	565	102.0	104.9	104.5	106.4	111.7	114.5	120.4	133.8	138.8	142.1	145.6
Shoe stores	566	102.7	107.2	106.1	105.1	111.5	113.2	126.3	134.5	146.9	143.5	136.4
Miscellaneous apparel and accessory stores	569	96.3	95.2	88.6	78.8	89.1	92.9	100.4	122.1	127.1	118.1	131.0
Furniture and homefurnishings stores	571	98.6	100.9	101.8	101.5	108.4	107.6	108.8	112.0	118.6	119.4	121.6
Household appliance stores	572	98.5	103.5	102.8	105.2	113.9	117.0	121.2	138.7	141.8	155.5	184.5
Radio, television, computer, and music stores	573	118.6	114.6	119.6	128.3	137.8	152.7	177.0	196.7	204.6	215.1	258.9
Eating and drinking places	581	102.8	102.2	104.0	103.1	102.5	102.8	101.1	100.9	99.5	100.5	101.1
Drug and proprietary stores	591	101.9	102.5	103.6	104.7	103.6	105.4	105.7	106.9	109.6	115.4	117.7
Liquor stores	592	98.2	101.1	105.2	105.9	108.4	100.7	99.1	103.7	112.8	108.9	113.9
Used merchandise stores	593	105.3	104.9	100.3	98.6	110.4	112.1	115.4	117.3	129.8	138.0	158.4
Miscellaneous shopping goods stores	594	100.7	104.2	104.2	105.0	102.7	106.5	111.9	117.8	120.0	123.7	131.5
Nonstore retailers	596	105.6	110.8	108.8	109.3	122.1	127.5	143.3	146.1	165.5	177.2	193.5
Fuel dealers	598	95.6	92.0	84.4	85.3	84.4	92.7	100.7	114.2	115.8	113.4	112.0
Retail stores, n.e.c.	599	105.9	103.1	113.7	103.2	111.6	117.3	125.0	126.2	139.5	147.3	157.6
Finance and services												
Commercial banks	602	102.8	104.8	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	133.0
Hotels and motels	701	97.6	95.0	96.1	99.1	107.8	106.2	109.6	110.1	109.7	107.9	108.8
Laundry, cleaning, and garment services	721	97.2	99.7	101.8	99.2	98.3	98.9	104.0	105.5	108.7	108.0	113.5
Photographic studios, portrait	722	100.1	94.9	96.6	92.8	97.7	105.9	117.4	129.3	126.6	133.7	153.4
Beauty shops	723	95.1	99.6	96.8	94.8	99.6	95.7	99.8	103.5	106.3	107.5	108.4
Barber shops	724	108.8	111.6	100.2	94.1	112.1	120.8	117.7	114.6	127.6	149.0	153.0
Funeral services and crematories	726	102.5	97.9	90.9	89.5	103.2	98.2	103.8	99.7	97.1	101.3	107.0
Automotive repair shops	753	105.7	108.1	106.9	98.7	103.3	104.0	112.3	119.5	114.1	115.2	121.2
Motion picture theaters	783	107.1	114.3	115.8	116.0	110.8	109.8	106.5	101.4	100.5	99.8	101.3

[1] Refers to output per employee.

[2] Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

- Data not available.

43. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		1997	1998				1999		
	1997	1998	IV	I	II	III	IV	I	II	III
United States	4.9	4.5	4.7	4.7	4.4	4.5	4.4	4.3	4.3	4.2
Canada	9.2	8.3	8.9	8.6	8.4	8.3	8.0	7.8	8.0	7.6
Australia	8.6	8.0	8.3	8.1	8.0	8.1	7.7	7.4	7.4	7.2
Japan	3.4	4.1	3.5	3.7	4.2	4.3	4.4	4.7	4.8	4.8
France	12.4	11.7	12.3	12.0	11.7	11.7	11.5	11.3	11.2	11.1
Germany	9.9	9.4	10.0	9.9	9.5	9.1	9.1	9.0	9.0	9.1
Italy[1]	12.3	12.3	12.3	12.2	12.3	12.4	12.4	12.3	12.1	–
Sweden	10.1	8.4	9.1	8.8	8.6	8.5	7.7	7.4	7.0	7.1
United Kingdom	7.0	6.3	6.6	6.4	6.3	6.3	6.3	6.3	6.1	5.9

[1] Quarterly rates are for the first month of the quarter.

– Data not available.

NOTE: Quarterly figures for France, Germany, and the United Kingdom are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries,1959–1998* (Bureau of Labor Statistics, Oct. 22, 1999).

44. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Civilian labor force										
United States[1]	123,869	125,840	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673
Canada	14,151	14,329	14,408	14,482	14,663	14,832	14,928	15,145	15,354	15,632
Australia	8,228	8,444	8,490	8,562	8,619	8,776	9,001	9,127	9,221	9,347
Japan	61,920	63,050	64,280	65,040	65,470	65,780	65,990	66,450	67,200	67,240
France	24,170	24,300	24,490	24,550	24,650	24,760	24,820	25,080	25,140	25,390
Germany[2]	28,840	29,410	39,120	39,040	39,130	39,210	39,050	39,180	39,450	39,430
Italy	22,530	22,670	22,940	22,910	22,760	22,640	22,700	22,820	22,850	23,000
Netherlands	6,430	6,640	6,750	6,950	7,090	7,190	7,270	7,370	7,530	7,720
Sweden	4,552	4,597	4,591	4,520	4,443	4,418	4,460	4,459	4,418	4,402
United Kingdom	28,580	28,730	28,610	28,410	28,310	28,280	28,480	28,620	28,760	28,870
Participation rate[3]										
United States	66.5	66.5	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1
Canada	67.5	67.3	66.7	65.9	65.5	65.3	64.8	64.9	64.8	65.1
Australia	64.0	64.6	64.1	63.9	63.6	63.9	64.6	64.6	64.3	64.4
Japan	62.2	62.6	63.2	63.4	63.3	63.1	62.9	63.0	63.2	62.8
France	56.1	56.0	56.0	55.8	55.6	55.5	55.2	55.4	55.2	55.6
Germany[2]	55.2	55.3	58.9	58.3	58.0	57.6	57.2	57.4	57.6	57.6
Italy	47.3	47.2	47.7	47.5	48.1	47.5	47.5	47.7	47.7	47.8
Netherlands	54.7	56.1	56.5	57.8	58.5	59.0	59.3	59.8	60.7	62.0
Sweden	67.3	67.4	67.0	65.7	64.5	63.7	64.1	64.0	63.4	63.1
United Kingdom	64.0	64.1	63.7	63.1	62.8	62.5	62.7	62.7	62.8	62.7
Employed										
United States	117,342	118,793	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463
Canada	13,086	13,165	12,916	12,842	13,015	13,292	13,506	13,676	13,941	14,326
Australia	7,720	7,859	7,676	7,637	7,680	7,921	8,235	8,344	8,429	8,597
Japan	60,500	61,710	62,920	63,620	63,810	63,860	63,890	64,200	64,900	64,450
France	21,850	22,100	22,140	21,990	21,740	21,710	21,890	21,950	22,010	22,410
Germany[2]	27,200	27,950	36,910	36,420	36,020	35,900	35,850	35,680	35,540	35,720
Italy	20,770	21,080	21,360	21,230	20,430	20,080	19,980	20,060	20,050	20,170
Netherlands	5,980	6,230	6,350	6,560	6,620	6,670	6,760	6,900	7,130	7,410
Sweden	4,480	4,513	4,447	4,265	4,028	3,992	4,056	4,019	3,973	4,034
United Kingdom	26,510	26,740	26,090	25,530	25,340	25,550	26,000	26,280	26,740	27,050
Employment-population ratio[4]										
United States	63.0	62.8	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1
Canada	62.4	61.9	59.8	58.4	58.2	58.5	58.6	58.6	58.9	59.7
Australia	60.1	60.1	57.9	57.0	56.6	57.7	59.1	59.1	58.8	59.2
Japan	60.8	61.3	61.8	62.0	61.7	61.3	60.9	60.9	61.0	60.2
France	50.7	50.9	50.6	49.9	49.0	48.7	48.7	48.5	48.3	49.1
Germany[2]	52.0	52.6	55.5	54.4	53.4	52.8	52.5	52.2	51.9	52.2
Italy	43.6	43.9	44.5	44.0	43.1	42.1	41.8	41.9	41.8	41.9
Netherlands	50.9	52.6	53.2	54.5	54.7	54.7	55.1	55.9	57.5	59.5
Sweden	66.2	66.1	64.9	62.0	58.5	57.6	58.3	57.6	57.0	57.8
United Kingdom	59.3	59.6	58.0	56.7	56.2	56.5	57.2	57.6	58.3	58.8
Unemployed										
United States	6,528	7,047	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210
Canada	1,065	1,164	1,492	1,640	1,649	1,541	1,422	1,469	1,414	1,305
Australia	508	585	814	925	939	856	766	783	791	750
Japan	1,420	1,340	1,360	1,420	1,660	1,920	2,100	2,250	2,300	2,790
France	2,320	2,210	2,350	2,560	2,910	3,050	2,920	3,130	3,120	2,980
Germany[2]	1,640	1,460	2,210	2,620	3,110	3,320	3,200	3,500	3,910	3,710
Italy	1,760	1,590	1,580	1,680	2,330	2,560	2,720	2,760	2,800	2,840
Netherlands	450	410	400	390	470	520	510	470	400	310
Sweden	72	84	144	255	415	426	404	440	445	368
United Kingdom	2,070	1,990	2,520	2,880	2,970	2,730	2,480	2,340	2,020	1,820
Unemployment rate										
United States	5.3	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5
Canada	7.5	8.1	10.4	11.3	11.2	10.4	9.5	9.7	9.2	8.3
Australia	6.2	6.9	9.6	10.8	10.9	9.7	8.5	8.6	8.6	8.0
Japan	2.3	2.1	2.1	2.2	2.5	2.9	3.2	3.4	3.4	4.1
France	9.6	9.1	9.6	10.4	11.8	12.3	11.8	12.5	12.4	11.7
Germany[2]	5.7	5.0	5.6	6.7	7.9	8.5	8.2	8.9	9.9	9.4
Italy	7.8	7.0	6.9	7.3	10.2	11.3	12.0	12.1	12.3	12.3
Netherlands	7.0	6.2	5.9	5.6	6.6	7.2	7.0	6.4	5.3	4.0
Sweden	1.6	1.8	3.1	5.6	9.3	9.6	9.1	9.9	10.1	8.4
United Kingdom	7.2	6.9	8.8	10.1	10.5	9.7	8.7	8.2	7.0	6.3

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1998*, October 22, 1999, on the Internet at http://stats.bls.gov/flsdata.htm.

[3] Labor force as a percent of the working-age population.

[4] Employment as a percent of the working-age population.

NOTE: See "Notes on the data" for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden. Dash indicates data not available.

45. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1987	1988	1989	1990	1991	1993	1994	1995	1996	1997	1998
Output per hour														
United States	–	–	71.9	94.4	98.0	97.1	97.8	98.3	102.1	108.3	114.9	117.3	122.1	127.9
Canada	40.7	59.2	75.3	91.3	91.1	92.4	95.3	95.1	102.5	106.2	108.9	107.3	111.0	111.7
Japan	14.0	38.0	63.9	81.2	84.8	89.5	95.4	99.4	100.5	101.8	109.3	115.8	121.4	120.4
Belgium	18.0	32.9	65.4	88.9	92.0	96.9	96.8	99.1	102.5	108.4	113.2	114.7	121.8	122.6
Denmark	29.9	52.7	90.3	90.6	94.1	99.6	99.1	99.6	104.5	–	–	–	–	–
France	21.8	43.1	66.7	81.8	87.4	91.9	93.5	96.9	100.6	108.5	114.4	114.9	123.2	127.4
Germany	29.2	52.0	77.2	88.1	91.5	94.6	99.0	101.9	100.6	107.9	111.2	115.1	121.8	127.1
Italy	19.6	36.8	64.1	85.1	86.7	89.4	92.5	95.2	102.9	105.6	109.3	110.3	113.4	113.6
Netherlands	18.6	38.1	69.2	91.6	93.7	97.1	98.6	99.6	101.4	112.7	117.7	119.7	125.7	127.8
Norway	36.7	57.8	76.7	93.3	92.1	94.6	96.6	97.5	100.6	101.4	102.0	102.0	101.9	104.1
Sweden	27.6	52.8	74.0	90.1	90.8	93.8	95.0	95.0	106.7	116.1	122.4	125.4	133.6	136.5
United Kingdom	31.2	44.7	56.1	79.4	82.3	86.2	88.3	92.2	104.0	106.8	104.8	103.2	104.0	105.1
Output														
United States	–	–	77.3	97.9	104.5	104.0	102.5	98.7	103.5	112.2	119.6	121.6	128.8	135.0
Canada	34.2	60.5	85.4	103.2	109.3	110.8	106.6	98.8	105.1	113.2	118.8	120.2	128.0	133.0
Japan	10.7	38.8	59.9	78.4	84.6	90.2	96.3	101.4	96.0	95.4	100.6	106.7	111.1	103.6
Belgium	30.7	57.6	78.2	88.8	93.3	99.1	101.0	100.7	97.0	101.4	104.2	104.2	109.0	111.8
Denmark	40.8	68.0	91.3	99.3	100.8	104.3	102.7	101.7	99.0	109.3	114.7	117.8	120.3	126.5
France	31.0	64.1	88.7	87.2	92.2	97.2	99.1	99.8	95.7	100.3	104.8	104.5	110.2	114.6
Germany	41.5	70.9	85.3	88.0	90.9	94.0	99.1	102.8	91.8	93.5	93.7	92.5	95.8	100.7
Italy	21.4	44.7	78.4	88.2	94.5	98.1	99.6	99.2	96.4	102.2	107.2	106.7	110.4	112.5
Netherlands	31.7	59.5	77.4	89.5	92.8	96.9	100.1	100.6	98.2	104.2	107.8	108.4	114.1	116.6
Norway	56.5	89.1	103.6	110.7	105.3	101.3	100.2	98.3	102.7	106.7	109.0	110.1	113.3	116.4
Sweden	46.5	81.7	91.8	107.7	110.2	111.6	110.6	103.6	101.3	115.7	130.1	132.9	140.3	146.4
United Kingdom	67.7	90.3	87.2	94.4	101.4	105.4	105.3	100.0	101.4	106.1	107.8	108.2	109.6	110.0
Total hours														
United States	92.1	104.4	107.5	103.8	106.6	107.1	104.8	100.4	101.4	103.6	104.0	103.7	105.5	105.6
Canada	84.1	102.1	113.5	113.0	120.0	119.9	111.9	103.8	102.6	106.6	109.1	112.0	115.4	119.0
Japan	76.3	102.3	93.8	96.6	99.8	100.8	100.9	102.0	95.6	93.7	92.0	92.2	91.5	86.1
Belgium	170.7	174.7	119.7	100.0	101.5	102.3	104.3	101.5	94.7	93.6	92.0	90.8	89.5	91.2
Denmark	136.5	129.0	101.1	109.6	107.2	104.7	103.7	102.1	94.8	–	–	–	–	–
France	142.1	148.7	133.1	106.6	105.5	105.8	105.9	103.0	95.1	92.4	91.6	91.0	89.5	89.9
Germany	142.3	136.3	110.5	99.9	99.3	99.3	100.1	100.9	91.3	86.7	84.3	80.4	78.6	79.3
Italy	109.0	121.2	122.4	103.6	108.9	109.7	107.7	104.2	93.6	96.7	98.0	96.7	97.4	99.0
Netherlands	170.6	156.2	111.8	97.7	99.0	99.8	101.5	101.0	96.9	92.4	91.6	90.5	90.8	91.2
Norway	154.0	154.3	135.0	118.6	114.3	107.1	103.7	100.8	102.1	105.2	106.9	107.9	111.1	111.9
Sweden	168.3	154.7	124.0	119.5	121.4	119.0	116.4	109.0	94.9	99.6	106.3	106.0	105.0	107.3
United Kingdom	217.3	202.1	155.3	118.9	123.2	122.3	119.2	108.5	97.5	99.4	102.9	104.8	105.4	104.7
Compensation per hour														
United States	14.9	23.7	55.6	80.7	84.0	86.6	90.8	95.6	102.7	105.6	107.9	109.3	113.4	119.4
Canada	10.4	17.8	47.7	75.3	77.8	82.5	89.5	94.7	99.6	100.4	103.6	102.8	106.7	110.8
Japan	4.3	16.5	58.6	77.9	79.2	84.2	90.7	95.9	104.6	106.7	109.5	110.9	113.9	115.8
Belgium	5.4	13.7	52.5	79.7	81.1	85.9	90.1	97.3	104.8	106.1	109.2	112.0	115.2	116.0
Denmark	4.6	13.3	49.6	80.1	82.9	87.7	92.7	95.9	104.6	–	–	–	–	–
France	4.3	10.3	40.8	78.6	81.6	86.0	90.6	96.2	102.8	105.0	107.6	109.5	112.3	113.9
Germany	8.1	20.7	53.6	76.0	79.1	83.2	89.4	95.1	105.9	111.7	117.7	123.7	126.6	127.6
Italy	1.6	4.7	28.2	66.7	69.3	75.9	84.4	93.6	107.5	107.8	112.8	120.9	125.9	124.8
Netherlands	6.4	20.2	64.4	87.8	87.7	88.5	90.8	95.2	103.7	108.2	110.6	113.2	115.8	118.3
Norway	4.7	11.8	39.0	78.5	83.3	87.2	92.3	97.5	101.5	104.4	109.2	113.6	119.1	126.4
Sweden	4.1	10.8	37.4	67.3	71.7	79.4	87.6	95.4	98.0	101.1	106.2	113.4	118.3	121.5
United Kingdom	3.1	6.3	33.2	64.8	67.7	72.9	80.9	90.5	104.3	106.5	107.4	108.2	111.4	117.8
Unit labor costs: National currency basis														
United States	–	–	77.2	85.5	85.7	89.2	92.8	97.2	100.6	97.6	93.9	93.2	92.9	93.4
Canada	25.5	30.0	63.3	82.5	85.5	89.2	93.9	99.6	97.2	94.5	95.2	95.8	96.2	99.2
Japan	30.9	43.3	91.7	96.0	93.4	94.0	95.0	96.5	104.1	104.9	100.1	95.8	93.8	96.2
Belgium	30.1	41.7	80.3	89.7	88.1	88.7	93.0	98.1	102.3	97.9	96.4	97.6	94.6	94.7
Denmark	15.4	25.2	55.0	88.4	88.2	88.1	93.6	96.3	100.1	93.0	93.8	92.7	95.9	94.0
France	19.5	24.0	61.2	96.2	93.4	93.6	96.8	99.3	102.2	96.8	94.1	95.3	91.2	89.4
Germany	27.8	39.8	69.4	86.3	86.5	87.9	90.3	93.3	105.3	103.6	105.9	107.5	103.9	100.4
Italy	8.0	12.7	44.0	78.3	79.9	84.9	91.3	98.4	104.4	102.1	103.2	109.6	111.1	109.8
Netherlands	34.4	52.9	93.0	95.9	93.6	91.1	92.1	95.5	102.3	96.0	94.0	94.6	92.2	92.5
Norway	12.9	20.4	50.8	84.1	90.4	92.2	95.6	100.0	100.9	102.9	107.1	111.4	116.9	121.4
Sweden	14.9	20.5	50.6	74.7	79.0	84.7	92.3	100.4	91.8	87.0	86.8	90.4	88.5	89.0
United Kingdom	9.8	14.1	59.1	81.6	82.2	84.6	91.6	98.2	100.3	99.7	102.5	104.8	107.1	112.1
Unit labor costs: U.S. dollar basis														
United States	–	–	77.2	85.5	85.7	89.2	92.8	97.2	100.6	97.6	93.9	93.2	92.9	93.4
Canada	31.8	34.7	65.4	75.2	83.9	91.0	97.2	105.0	91.1	83.6	83.8	84.9	83.9	80.8
Japan	10.9	15.3	51.3	84.2	92.4	86.3	83.1	90.9	118.8	130.1	135.1	111.7	98.3	93.1
Belgium	19.4	27.0	88.3	77.2	77.0	72.3	89.5	92.3	95.1	94.2	105.2	101.4	84.9	83.8
Denmark	13.5	20.3	58.9	77.9	79.0	72.6	91.3	90.8	93.2	88.3	101.1	96.5	87.6	84.7
France	21.1	23.0	76.7	84.7	82.9	77.7	94.1	93.1	95.5	92.4	99.9	98.6	82.6	80.2
Germany	10.4	17.1	59.6	74.9	76.9	73.0	87.3	87.8	99.4	99.8	115.5	111.6	93.5	89.1
Italy	16.0	24.9	63.3	74.4	75.6	76.2	93.8	97.6	81.8	78.1	78.0	87.5	80.3	77.9
Netherlands	16.0	25.7	82.3	83.2	83.2	75.5	88.9	89.8	96.8	92.8	103.0	98.6	83.0	82.0
Norway	11.3	17.8	63.9	77.5	86.1	82.9	95.0	95.7	88.3	90.7	105.0	107.1	102.5	99.9
Sweden	16.8	23.0	69.6	68.5	75.0	76.4	90.8	96.6	68.6	65.7	70.8	78.5	67.5	65.2
United Kingdom	15.6	19.2	77.8	75.7	82.9	78.5	92.5	98.2	85.3	86.5	91.6	95.6	99.3	105.2

– Data not available.

46. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]
PRIVATE SECTOR[5]												
Total cases	8.3	8.6	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7
Lost workday cases	3.8	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1
Lost workdays	69.9	76.1	78.7	84.0	86.5	93.8	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	11.2	10.9	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9
Lost workday cases	5.7	5.6	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9
Lost workdays	94.1	101.8	100.9	112.2	108.3	126.9	–	–	–	–	–	–
Mining												
Total cases	8.5	8.8	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9
Lost workday cases	4.9	5.1	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9
Lost workdays	144.0	152.1	137.2	119.5	129.6	204.7	–	–	–	–	–	–
Construction												
Total cases	14.7	14.6	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8
Lost workday cases	6.8	6.8	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0
Lost workdays	135.8	142.2	143.3	147.9	148.1	161.9	–	–	–	–	–	–
General building contractors:												
Total cases	14.2	14.0	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4
Lost workday cases	6.5	6.4	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9
Lost workdays	134.0	132.2	137.3	137.6	132.0	142.7	–	–	–	–	–	–
Heavy construction, except building:												
Total cases	14.5	15.1	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2
Lost workday cases	6.4	7.0	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1
Lost workdays	139.1	162.3	147.1	144.6	160.1	165.8	–	–	–	–	–	–
Special trades contractors:												
Total cases	15.0	14.7	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1
Lost workday cases	7.1	7.0	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1
Lost workdays	135.7	141.1	144.9	153.1	151.3	168.3	–	–	–	–	–	–
Manufacturing												
Total cases	11.9	13.1	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7
Lost workday cases	5.3	5.7	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7
Lost workdays	95.5	107.4	113.0	120.7	121.5	124.6	–	–	–	–	–	–
Durable goods:												
Total cases	12.5	14.2	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7
Lost workday cases	5.4	5.9	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0
Lost workdays	96.8	111.1	116.5	123.3	122.9	126.7	–	–	–	–	–	–
Lumber and wood products:												
Total cases	18.9	19.5	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2
Lost workday cases	9.6	10.0	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8
Lost workdays	176.5	189.1	177.5	172.5	172.0	165.8	–	–	–	–	–	–
Furniture and fixtures:												
Total cases	15.4	16.6	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4
Lost workday cases	6.7	7.3	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7
Lost workdays	103.6	115.7	–	–	–	128.4	–	–	–	–	–	–
Stone, clay, and glass products:												
Total cases	14.9	16.0	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8
Lost workday cases	7.1	7.5	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0
Lost workdays	135.8	141.0	149.8	160.5	156.0	152.2	–	–	–	–	–	–
Primary metal industries:												
Total cases	17.0	19.4	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0
Lost workday cases	7.4	8.2	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0
Lost workdays	145.8	161.3	168.3	180.2	169.1	175.5	–	–	–	–	–	–
Fabricated metal products:												
Total cases	17.0	18.8	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9
Lost workday cases	7.2	8.0	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5
Lost workdays	121.9	138.8	147.6	155.7	146.6	144.0	–	–	–	–	–	–
Industrial machinery and equipment:												
Total cases	11.3	12.1	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5
Lost workday cases	4.4	4.7	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0
Lost workdays	72.7	82.8	86.8	88.9	86.6	87.7	–	–	–	–	–	–
Electronic and other electrical equipment:												
Total cases	7.2	8.0	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9
Lost workday cases	3.1	3.3	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8
Lost workdays	55.9	64.6	77.5	79.4	83.0	81.2	–	–	–	–	–	–
Transportation equipment:												
Total cases	13.5	17.7	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6
Lost workday cases	5.7	6.6	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6
Lost workdays	105.7	134.2	138.6	153.7	166.1	186.6	–	–	–	–	–	–
Instruments and related products												
Total cases	5.8	6.1	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0
Lost workday cases	2.4	2.6	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9
Lost workdays	43.9	51.5	55.4	57.8	64.4	65.3	–	–	–	–	–	–
Miscellaneous manufacturing industries:												
Total cases	10.7	11.3	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1
Lost workday cases	4.6	5.1	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9
Lost workdays	81.5	91.0	97.6	113.1	104.0	108.2	–	–	–	–	–	–

See footnotes at end of table.

46. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1987	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]
Nondurable goods:												
Total cases	11.1	11.4	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2
Lost workday cases	5.1	5.4	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3
Lost workdays	93.5	101.7	107.8	116.9	119.7	121.8	–	–	–	–	–	–
Food and kindred products:												
Total cases	17.7	18.5	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6
Lost workday cases	8.6	9.2	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5
Lost workdays	153.7	169.7	174.7	202.6	207.2	211.9	–	–	–	–	–	–
Tobacco products:												
Total cases	8.6	9.3	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4
Lost workday cases	2.5	2.9	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.1
Lost workdays	46.4	53.0	64.2	62.3	52.0	42.9	–	–	–	–	–	–
Textile mill products:												
Total cases	9.0	9.6	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	6.7
Lost workday cases	3.6	4.0	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4
Lost workdays	65.9	78.8	81.4	85.1	88.3	87.1	–	–	–	–	–	–
Apparel and other textile products:												
Total cases	7.4	8.1	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2
Lost workday cases	3.1	3.5	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6
Lost workdays	59.5	68.2	80.5	92.1	99.9	104.6	–	–	–	–	–	–
Paper and allied products:												
Total cases	12.8	13.1	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1
Lost workday cases	5.8	5.9	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7
Lost workdays	122.3	124.3	132.9	124.8	122.7	125.9	–	–	–	–	–	–
Printing and publishing:												
Total cases	6.7	6.6	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4
Lost workday cases	3.1	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8
Lost workdays	55.1	59.8	63.8	69.8	74.5	74.8	–	–	–	–	–	–
Chemicals and allied products:												
Total cases	7.0	7.0	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2
Lost workday cases	3.1	3.3	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1
Lost workdays	58.8	59.0	63.4	61.6	62.4	64.2	–	–	–	–	–	–
Petroleum and coal products:												
Total cases	7.3	7.0	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9
Lost workday cases	3.1	3.2	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8
Lost workdays	65.9	68.4	68.1	77.3	68.2	71.2	–	–	–	–	–	–
Rubber and miscellaneous plastics products:												
Total cases	15.9	16.3	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2
Lost workday cases	7.6	8.1	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8
Lost workdays	130.8	142.9	147.2	151.3	150.9	153.3	–	–	–	–	–	–
Leather and leather products:												
Total cases	12.4	11.4	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8
Lost workday cases	5.8	5.6	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5
Lost workdays	114.5	128.2	130.4	152.3	140.8	128.5	–	–	–	–	–	–
Transportation and public utilities												
Total cases	8.4	8.9	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3
Lost workday cases	4.9	5.1	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3
Lost workdays	108.1	118.6	121.5	134.1	140.0	144.0	–	–	–	–	–	–
Wholesale and retail trade												
Total cases	7.7	7.8	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5
Lost workday cases	3.4	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8
Lost workdays	56.1	60.9	63.5	65.6	72.0	80.1	–	–	–	–	–	–
Wholesale trade:												
Total cases	7.4	7.6	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5
Lost workday cases	3.7	3.8	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3
Lost workdays	64.0	69.2	71.9	71.5	79.2	82.4	–	–	–	–	–	–
Retail trade:												
Total cases	7.8	7.9	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5
Lost workday cases	3.3	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7
Lost workdays	52.9	57.6	60.0	63.2	69.1	79.2	–	–	–	–	–	–
Finance, insurance, and real estate												
Total cases	2.0	2.0	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	1.9
Lost workday cases	.9	.9	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	0.9	0.7
Lost workdays	14.3	17.2	17.6	27.3	24.1	32.9	–	–	–	–	–	–
Services												
Total cases	5.5	5.4	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2
Lost workday cases	2.7	2.6	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4
Lost workdays	45.8	47.7	51.2	56.4	60.0	68.6	–	–	–	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:

N = number of injuries and illnesses or lost workdays;

EH = total hours worked by all employees during the calendar year; and

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

– Data not available.

47. Fatal occupational injuries by event or exposure, 1993–98

Event or exposure[1]	Fatalities			
	1993–97	1997[2]	1998	
	Average	Number	Number	Percent
Total	6,335	6,238	6,026	100
Transportation incidents	2,611	2,605	2,630	44
Highway incident	1,334	1,393	1,431	24
Collision between vehicles, mobile equipment	652	640	701	12
Moving in same direction	109	103	118	2
Moving in opposite directions, oncoming	234	230	271	4
Moving in intersection	132	142	142	2
Vehicle struck stationary object or equipment	249	282	306	5
Noncollision incident	360	387	373	6
Jackknifed or overturned—no collision	267	298	300	5
Nonhighway (farm, industrial premises) incident	388	377	384	6
Overturned	214	216	216	4
Aircraft	315	261	223	4
Worker struck by a vehicle	373	367	413	7
Water vehicle incident	106	109	112	2
Railway	83	93	60	1
Assaults and violent acts	1,241	1,111	960	16
Homicides	995	860	709	12
Shooting	810	708	569	9
Stabbing	75	73	61	1
Other, including bombing	110	79	79	1
Self-inflicted injuries	215	216	223	4
Contact with objects and equipment	1,005	1,035	941	16
Struck by object	573	579	517	9
Struck by falling object	369	384	317	5
Struck by flying object	65	54	58	1
Caught in or compressed by equipment or objects	290	320	266	4
Caught in running equipment or machinery	153	189	129	2
Caught in or crushed in collapsing materials	124	118	140	2
Falls	668	716	702	12
Fall to lower level	591	653	623	10
Fall from ladder	94	116	111	2
Fall from roof	139	154	156	3
Fall from scaffold, staging	83	87	97	2
Fall on same level	52	44	51	1
Exposure to harmful substances or environments	586	554	572	9
Contact with electric current	320	298	334	6
Contact with overhead power lines	128	138	153	3
Contact with temperature extremes	43	40	46	1
Exposure to caustic, noxious, or allergenic substances	120	123	104	2
Inhalation of substances	70	59	48	1
Oxygen deficiency	101	90	87	1
Drowning, submersion	80	72	75	1
Fires and explosions	199	196	205	3
Other events or exposures[3]	26	21	16	-

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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Employment situation	July 7	June	August 4	July	September 1	August	1; 4–20
Productivity and costs			August 8	2nd quarter	September 6	2nd quarter	2; 39–42
U.S. Import and Export Price Indexes	July 13	June	August 10	July	September 13	August	34–38
Producer Price Indexes	July 14	June	August 11	July	September 14	August	2; 31–33
Consumer Price indexes	July 18	June	August 16	July	September 15	August	2; 28–30
Real earnings	July 18	June	August 16	July	September 15	August	14, 16
Employment Cost Indexes	July 27	2nd quarter					1–3; 21–24